



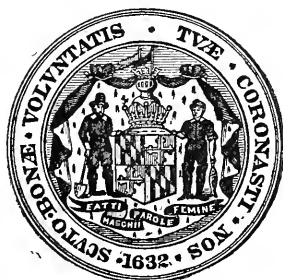
9.
SECOND ANNUAL REPORT

OF THE

Bureau of Industrial Statistics
OF MARYLAND.

A. B. HOWARD, JR., CHIEF OF BUREAU.

1894.



ANNAPOLIS:
KING BROS., STATE PRINTERS,

1894.

NOTICE.

Persons receiving this Report are respectfully requested to acknowledge it.

Departments or institutions publishing official reports which may be of use to the Bureau will confer a favor by forwarding exchanges.

Editors of newspapers and periodicals publishing articles connected with economic questions, or reviews on this Report, are particularly requested to mail copies to the Bureau.

Any suggestions made to the Chief of the Bureau by persons interested in social or economic investigation, will be thankfully received and carefully considered.

Respectfully,

A. B. HOWARD, Jr.,

Chief of Bureau.

230 NORTH CHARLES STREET,

BALTIMORE, MD.

Digitized by the Internet Archive
in 2010 with funding from
Lyrasis Members and Sloan Foundation

CONTENTS.

	PAGE		PAGE
INTRODUCTION.		TAXATION AND ASSESSMENT—	
An insufficient appropriation...	1	Continued.	
Other States more liberal.....	3	<i>The present law—</i>	
The value of statistics.....	4	Record of property assessed..	74
Capabilities of the Bureau.....	6	Levy of taxes.....	75
The demand for reports..	9	Payment by administrators	
The subjects treated.....	11	and executors.....	76
AGRICULTURAL IMMIGRATION.		Payment by tenants.....	77
Its vital importance.....	12	Taxes, when due.....	77
A suggestive correspondence...	12	Completion of collections by	
New methods imperative.....	26	collector.....	77
Initiatory steps.....	29	Limitations.....	77
Some of the plans proposed...	31	Payment of taxes by corpora-	
Obstructive speculation..	33	tions.....	77
Uncultivated areas.....	35	Payment of taxes on Balti-	
Valuable marsh lands.....	36	more city stock.....	83
Area and population.....	39	State tax on public debt of the	
Diversified agriculture	40	State.....	84
Mineral resources.....	45	Assessment for State taxes of	
Promise of the future.....	47	stocks of public and private	
TAXATION AND ASSESSMENT.		corporations.....	85
Timely subject for inquiry.....	48	Tax on commissions of execu-	
What the books reveal.....	49	tors and administrators....	85
Constitutional amendment.....	54	Collateral inheritance tax....	85
A congressional inquiry.....	57	Tax on official commissions..	86
Lack of conscience in taxation.	58	Assessment of corporate stock	
City docks as a source of reve-		owned by non-residents....	88
nue.	60	State Tax Commissioner.....	88
As applied to Baltimore.	62	Increase of assessment.....	98
What a comparison shows	64	Tax on gross receipts of rail-	
<i>The present law</i>	66	road companies.....	99
Valuation and assessment....	66	Additions by the Acts of 1890.	103
Exemptions	67	Additions by the Acts of 1892.	120
Mode of valuation and assess-		<i>Senate bill of 1892</i>	123
ment.	69	What is to be assessed.....	123
Appeal Tax Court.....	72	What is to be exempted.....	126
Assessments—abatements and		How to make returns.....	128
additions.....	72	Franchise taxes.....	132
Assessment—removals of prop-		Boards of control and review.	133
erty.....	73	Pay of officials..	134
Rates and items of State tax..	74	Power of removal.	135
		The oath of office.....	136

	PAGE		PAGE
TAXATION AND ASSESSMENT—		THE OYSTER INDUSTRY—	
Continued.		Continued.	
<i>Senate bill of 1892—</i>		From 1820 to 1864.....	223
Schedules and interrogatories.....	137	From 1865 to 1893.....	228
When the work begins.....	138	The oyster grounds.....	234
Questions under oath.....	140	Natural reefs.....	237
Returns to be made.....	140	Tangier and Pocomoke regions.....	243
The listing feature.....	141	Chester river.....	248
To search for property.....	144	Patuxent river.....	248
Exemption claims.....	148	Potomac river.....	249
In cases of disagreement.....	148	Bay-shore grounds.....	251
Pains and penalties.....	149	Sinepuxent oyster-grounds.....	252
Returns to be made.....	150	Tonging.....	255
Records to be kept.....	153	Boats and apparatus.....	267
Quadrennial listing.....	155	Tongmen.....	269
General supervision.....	157	Dredging.....	270
Books and stationery.....	158	The dredging grounds.....	277
Eligibility.....	159	Dredging vessels and boats.....	279
PUBLIC ROADS.		Apparatus and methods.....	283
The ten-block system.....	161	Men on dredging vessels.....	284
Advantages of the system.....	164	Financial results.....	290
Copy of the ordinance.....	167	Scraping.....	291
A local illustration.....	175	Grounds, area, etc.....	296
Over several roads.....	176	Boats and vessels.....	297
Block division points.....	176	The scrapemen.....	298
For mail delivery.....	178	Oyster-culture in Maryland.....	299
Need not be free.....	180	Planting lots pre-empted.....	306
EMPLOYMENT AGENCIES.		The State as an oyster farmer.....	314
Ohio State agencies.....	183	Transporting.....	317
Iowa's experience.....	184	Transporting trade with other	
Baltimore agencies.....	185	States.....	319
Replies to inquiries.....	186	The oyster markets.....	322
Their business methods.....	188	The Baltimore markets.....	323
Location of agencies.....	189-194	The steaming trade.....	329
The alleged profits.....	195	The county markets.....	336
NEW INDUSTRIES.		Other ports.....	338
From January 1 to December		Statistical summary.....	343
31, 1892.....	197	Present extent of the industry.....	345
From January 1 to September		State revenue and fishery force.....	357
30, 1893.....	206	The State fishery force.....	366
The unemployed.....	212	Conclusion.....	369
THE OYSTER INDUSTRY.		Barren bottoms.....	378
Maryland ranks first.....	215	Chronological list of publica-	
General historical notes.....	221	tions.....	385
Prior to 1820.....	222	Financial statement of Bureau.....	389

STATE OF MARYLAND.

BUREAU OF INDUSTRIAL STATISTICS,
230 N. CHARLES STREET,
BALTIMORE, *January 1, 1894.*

To His Excellency Frank Brown,
Governor of the State of Maryland:

SIR:—I have the honor to submit for your consideration, and to transmit to the General Assembly, the second annual report of the Bureau of Industrial Statistics of the State of Maryland.

Very respectfully yours,

A. B. HOWARD, JR.,
Chief of Bureau.



INTRODUCTION.

An Insufficient Appropriation.

The conditions governing the practical working of this Bureau remaining unchanged since its reorganization by the Legislature of 1892, the preparation of the second annual report, of necessity involves much of the same ground that was gone over in the first.

It is proper and important that at the outset, attention should be directed to these conditions, under which it has operated, covering the period of its existence, its needs, and its capabilities, if properly equipped to carry out the objects and purposes of its creation, and to the work which it has accomplished within that time, as well as to that which lies before it.

In doing this, it again becomes necessary to attach especial emphasis to the chief underlying cause affecting the work of the Bureau, the palpable insufficiency of the appropriation for its support.

This is a subject for serious consideration if its efficiency is to be maintained, for so long as it is thus allowed to be embarrassed in the proper exercise of its functions, not only will its public usefulness be greatly impaired, but it will fail to subserve the very ends for which it was intended. Now that it has reached a point where, notwithstanding all obstacles, it is susceptible of easy demonstration that its work is of great public value, this would be most unfortunate, and a distinct denial to the people of the State of the right to which the law entitles them. Apart from this, it is unjust to the Chief of the Bureau, whoever he may be, to expect that he, with the most conscientious and painstaking effort possible, can,

under such difficulties, fulfil all the requirements of the law and the demands of his conscience. But, however great the appropriation made for the prosecution of such a work, that alone will not suffice, and unless he brings to the discharge of his duties a sincere determination to render faithful service, his work will be valueless.

There is no public work which requires more care, more thought and patient investigation, more accuracy, nor for which the necessary means to pursue a line of inquiry are more imperative than in the gathering and collating of statistical information. The dissemination of incorrect and untruthful statistics, either wilfully, to make a prejudiced showing, or through indifference, is dishonesty in a double sense, because it is the improper rendering of a public service, for which public money is paid, and because it is a widespread and wholesale deception and imposition upon the people, the ramifications of which are so great that it is not possible to estimate the injury which may thus be done. For these reasons, no such misstatements of fact nor perversion of the truth are to be tolerated.

An examination as to the duties required by the law and the amount which it sets apart for their performance, must show at a glance that they are out of all proportion. This became apparent to me as soon as I had familiarized myself with the duties of the office, and two years of experience has but served to strengthen the conclusion then reached. It is true, that the present appropriation is all that could have been secured at the time the Bureau was established. It was regarded by many at that time largely in the light of an experiment, and as such it would have been useless to ask for or to expect any more. But it has now passed the experimental stage and reached the point where, under a proper conception by the public of its prescribed duties, it has a valuable mission to fulfil and a duty to perform which will permanently fix its status as an indispensable part of the State government. It is with an impelling sense of the justice of the claim I make in behalf of the Bureau, that I ask more money for its support.

Other States More Liberal.

A comparison made in the first report between the appropriations of the leading States of the Union which have similar bureaus and our own, showed that in every instance they are much more liberal in the expenditure of money for such work. These appropriations range from \$7,500 to \$25,000. With many of them these sums do not include salaries of the Chiefs, traveling expenses, printing, nor office rent, and in addition, some of these bureaus are not required to go into an investigation of the numerous questions provided for in the law establishing this one, but are provided with additional appropriations for the prosecution of any special line of inquiry. When it is considered that Maryland appropriates only \$5,000, and that but one-half of this is available for expenses of all kinds, it would seem that no clearer demonstration need be given as to the importance of supplying the means commensurate with the work required. To establish the Bureau on a basis that will insure its usefulness, that will enable it to make such detailed and minute investigations as are absolutely necessary to secure the best results and to place it on a plane where its work will be above that criticism which cannot be avoided so long as it is improperly equipped, the sum of \$15,000 should be appropriated. It is poor economy to withhold that which is the very life of an institution that may be so largely productive of public good, and it may well be open to question whether the expenditure of too small a sum of money is not in the end more extravagant than a larger sum which may be needful, in that it wholly fails to accomplish what is desired. It is gratifying to state that my views regarding the administration of the office are cordially supported by those who have given the matter that consideration which it deserves, the press of the city and State, as well as organizations and individuals whose knowledge of the value of statistics and of statistical methods is such as to attract attention to the working of the office, and to give them a proper estimate of its services under proper conditions. From the very outset, the press has called attention to the insufficiency of the appropriation, and the sum I

have named is considerably within that which, in the opinions of many competent judges, it should be.

The Value of Statistics.

If any other authority be needed, none higher can be given than the Hon. Carroll D. Wright, the United States Commissioner of Labor, at Washington. In a recent article in the *Engineering Magazine*, upon the value of the statistics gathered by the State Bureaus, Mr. Wright shows clearly that the work done through these agencies has left its impress not only on the minds of the people, but upon the statutes of the various states, and that they are largely used and depended upon by foreign countries. He points out the abuses that have been corrected by them and uses the recent investigation of the tenement house system in Boston as a forcible illustration. Of this he says:

“One of the first results that I remember, as being traceable to a published report, related to the tenement-house system of the city of Boston. In the second, third and fourth reports of the Massachusetts Bureau of Statistics of Labor there were many facts showing the condition of the tenement-houses in the city named. The public was fully apprised of the misery that existed in them, resulting from bad conditions, ill construction, and all that tended to make tenement-house life an evil. Public attention was aroused through these publications, better laws were framed and passed, and a public sentiment created which crystallized in a reform movement having for its purpose the improvement of tenement-houses in Boston. Some of the worst places were improved, and the impetus then given is still active, as is shown by the existence of societies in that city, and their influence in securing from the Legislature two years ago, an appropriation to enable the bureau in that State to make a very exhaustive investigation covering every tenement of whatever grade in the city of Boston.”

Mr. Wright points out the value of such work as an educational influence in the community, which he truly says “can know itself in many directions only through rigid, impartial and fearless investigations.” The publication of information

in regard to the inspection of factories in England and other countries, he says, has led to the establishment of factory inspection in this country, and the effect has been the more general enforcement of laws affecting the health and welfare of factory operatives. After citing numerous other instances of the great good accomplished by these bureaus in a great variety of ways, Mr. Wright thus strikingly concludes:

“Notwithstanding all that I have said relative to the value and influence of the statistics of labor, I am perfectly well aware that they could be made of far greater value; but that greater value can only be secured through the direct action of the legislative bodies behind the bureaus. They are very poorly equipped. They need more men and more money. They need experience, which can only come through the influence of the Executives of the States. With an enlarged tenure of office and an increase in the equipment and means of the bureaus, their future usefulness can be made to far excel that of the past and of the present. The lines of work which they can undertake are numerous and inexhaustible. Knowledge of production is absolutely essential for the adjustment of many of the difficult questions we are facing to-day, and any contribution, through statistical investigation or otherwise, that will enable both the capitalist and his employe to more clearly understand the real conditions of production should be welcomed by all elements of the community. The bureaus must be kept in the future, as in the past, free from partisanship. The statistician is not a statistician when he is an advocate, no matter how skillful he may be in the manipulation of figures. He must be impartial, he must make his investigations without any reference to theories to be proved or disproved, and give to the world the actual results of his inquiries. This country lacks trained statisticians. We have no means for training them, except in the practical work of the statistical offices of the State and federal governments. These offices, therefore, become a school for the future, and the statisticians of this country that are to be of great service to the governments must acquire their knowledge through the statistical offices; but no work can be accomplished successfully without money and without men. We must look, therefore, to the legislative branches of our various governments for the increase of the usefulness and for recognized influence of our bureaus of statistics of labor.”

No statement could more clearly and truthfully portray the actual conditions under which these bureaus are expected to perform the duties required of them, and coming from a source at once so unprejudiced and so capable, they are more than ordinarily forceful. Added to my own honesty of conviction, it impresses me in more than any ordinary sense with the inestimable value to the State of such an office as this, rightly appreciated, sustained and administered.

Capabilities of the Bureau.

A field unexplored and practically inexhaustible, is before it for inquiry and research, rich in information that deals directly with those questions in which men are to-day most concerned. If the bureau is to carry out successfully even the first provision of the law, under which it is expected to set forth the resources of the State for the purpose of attracting immigration, a work is involved which, if reduced to a thoroughly statistical basis, and if given the attention which it justly deserves, has certainly not been properly conceived of by the mind which expects that it can be done with a sum so trifling. The impossibility of doing this work more thoroughly than I have done it, without the necessary means, was pointed out in my first report. A very large proportion of the people of Maryland know absolutely nothing about their State, its geographical and natural resources. One of the most gratifying evidences of progress is the desire to know more concerning it.

Apart from this, men are giving their minds more to the study of economic questions than at any time in the world's history. Social and industrial problems which a few years ago found little or no place in the public mind are now become paramount, and thinking men know that upon their proper solution depends the well being of the whole social structure. It is this time of intellectual activity, of unrest, of uncertainty, and of thirst for knowledge which has reached a point never known before; a time when men have become alike inquisitive and acquisitive; when approximation is not accepted

where demonstration is possible; when one-half of the world is no longer content not to know how the other half lives, that has brought these statistical bureaus into being, and indeed, made them a necessity. This is evidenced by the fact that they have been established in thirty-two States of the Union, and every year their work is increasing in its scope and its public value.

The growth of this demand for statistical work of all kinds within recent years has been remarkable, until now the field for investigation includes almost every subject to which any human interest attaches. Legislators, writers, public speakers and all who are concerned in human progress eagerly seek and gladly accept statistics upon the subjects with which they have to deal, and in some of the most important laws upon the statute books of the various states, they are made a basis. But an enlightened public opinion, at the same time that it demands such work, requires that it must be as near perfection as human efforts can bring it, and to this end, certainly, nothing is more essential than the means to make it so.

There is no phase of present day life into which closer inquiry is being made and which offers such opportunities for interesting and instructive investigation than all those things which concern the vast army of wage workers. The cost of living, wages, the sanitary condition of workshops and factories, working women, child labor and kindred subjects, present opportunities for the amelioration of evils well known to exist. Add to these the statistics of crimes, pauperism, and the countless ills which inevitably flow from poverty, and unwholesome economic conditions; of agriculture, of manufactures and such other subjects as are required by the law as at present in operation, the cost of production, a school and population census, in short, everything consistently within the scope of a permanent statistical office, could be centered in a bureau of this character, where it could be handled with efficiency and put into the best shape for distribution and use.

All of this is done by the Massachusetts Bureau, the first of the kind ever established, which, with the ample means furnished it by the Legislature, employs the most carefully trained and competent statisticians, and is doing a work held in the highest value all over the world. But in Massachusetts as well as in the other states, the best results are not secured alone by the expenditure of money, but by the judicious exercise of the authority vested in them by the laws under which they operate. Herein is as great an element of success as is any amount of money that may be expended, however large. It is idle to say "Do this," unless at the same time the power is given to enforce the performance of the act required. If the law commands a public officer to discharge duties which it imposes upon him, and does not give him the authority to carry out its mandates, it not only fails to surround his office with the respect to which it is entitled but renders his best efforts abortive and the law practically a nullity. So great an essential is authority of some kind in the exercise of such duties, even if in a modified form or hedged about with such restrictions as to prevent its improper use, that some of the most important lines of investigation undertaken in the preparation of my first report had to be wholly abandoned while others were presented in a way totally different from that in which they should have been.

It is a matter of great regret to me that the means of the Bureau have not permitted me to go into any of these questions which so nearly concern the working people. I have at no time lost sight of the fact that the Bureau as originally established in 1884, was intended to meet these requirements, and while under its reorganization it is only incidentally a Bureau of Labor Statistics, it still remains my purpose to consider at all times those things which may be beneficial and of interest to those included within the scope of such an inquiry, but unless the means are provided to do this work faithfully and with that conscientiousness of detail which it deserves, it, in my judgment, had far better not be undertaken at all.

A large part of what I have herein enumerated, bearing upon the administration of this Bureau, was in somewhat different form, clearly set forth in the first report, yet the references at that time made, were necessarily subject to the limitations which a lack of familiarity with the work made unavoidable. A wider acquaintance with the work, and a more thorough knowledge of the systems elsewhere in operation, together with the constant demand upon me for information which it is impossible to supply in the absence of a more thorough equipment, but serve to emphasize what I have formerly said, and to impress me more forcibly with the necessity for providing the means to supply this information. It was with the view to meeting the continual demands upon the Executive and State Departments for information regarding the State, which they had no means of giving, that the Bureau was put into its present shape. If it is to be frustrated in its efforts to serve the very objects of its creation, it becomes more a useless appendage than a useful adjunct.

The Demand for Reports.

The Bureau has been utterly unable to meet the calls upon it for copies of the first annual report. When it was reorganized by the Act of Assembly of 1892, it was required to make an annual, instead of a biennial, report; this, without making any provision for the printing of the report the intervening year, which had formerly been done by the State Printer at each session of the Legislature. The whole number, therefore, which I was able to have printed out of the small appropriation, was 1,000 copies. These, by August, only five months from the time the report was issued, had all been distributed, and since that time I have been regretfully compelled to state this fact in reply to the applications almost daily received. By request of the Executive Commissioner of the Maryland Board of Managers of the World's Fair, 300 copies of the report and several hundred bulletins were sent to the Maryland Building at Chicago. These were all quickly distributed, and a second request was made for as many copies as

I could supply, but there were no more on hand. The Commissioner afterwards told me personally that the desire for information concerning the State of Maryland, was so great, and so many demands were made upon him for the report, that he could have distributed many more than the entire edition printed. The reports distributed have been sent by request, not only to all parts of the United States, but to the principal centres of Europe, and 1,000 additional copies would hardly be sufficient to meet the continued demand for them.

It is clear that the change from a biennial to an annual report was a most excellent one for a number of reasons, but chiefly because statistics that are long delayed lose much of their value, and it is important that the results of a subject which is worth treating should be given to the public as speedily as possible. But it is also important that in making this change provision should be made for printing the report the years the Legislature is not in session, and when, consequently, there is no State Printer.

So far, however, as the number of reports is concerned, which the Bureau is to have for distribution, by the anomalous printing law now on the statute books, it is in no better position this year than last. That law requires that 2,000 copies of the report shall be printed, 1,000 of which shall be delivered by the printer to the labor organizations, 500 to the State Librarian, and leaving it vague, to say the least, what becomes of the other 500. It nowhere specifically requires him to supply any copies to the members of the Legislature, unless by the most remote construction of Section 6 of Article 78 of the Code, they are included in the printing which he is to deliver to the presiding officers of the two Houses for the use of the Legislature during its session, and certainly none to the Chief of the Bureau, leaving him without any control whatever, as to the distribution of any of the copies of his own reports. Yet it is to this source that all applications for reports of the Bureau are most naturally made. To meet this difficulty it has been necessary heretofore, by resolution of the

General Assembly, to appropriate a sum of money for 1,000 extra copies, but if the speedy distribution of the same number last year is to be taken as a guide, it will require a much larger number to meet the demand this year.

To summarize, that the Bureau may attain the highest efficiency, these requirements are absolutely essential: A sufficient appropriation, capable and efficient men, and their retention in office when it is evident that any change would seriously impair the work; a wider latitude of authority, and such changes governing the printing of the report as are shown to be necessary.

I most earnestly commend to the Executive and to the Legislature, that consideration of the suggestions I have made, which I think their importance warrants.

The Subjects Treated.

The most important subjects treated in this report are along the same lines of investigations made last year, notably in regard to the agricultural resources of the State and the importance of immigration; Taxation and Assessment, The Oyster Industry and Public Roads. This is because of the interest and importance that still attaches to them, and which indeed, is even greater than last year because of the session of the Legislature and the certainty that some, if not all, of them will be acted upon. The Bureau also deals with the subject of Employment Bureaus, as in operation in Baltimore, and contains brief reviews of Business Suspensions, New Industries and The Unemployed.

The financial statement, showing the expenditures of the Bureau for the year, is published in the report as required by law.

AGRICULTURAL IMMIGRATION.

Its Vital importance.

No question before the people of Maryland for discussion to-day, is of more vital importance to the agricultural interests of the State than the necessity for populating the large area of uncultivated farm lands. I have from the outset been exceedingly desirous of lending my best efforts to the furtherance of any plan which promises to bring the desired results, and it is most gratifying to be able to state that since the publication of my first report several promising movements have developed in that direction as a result of the work of the Bureau. All efforts to carry out the provisions of the law have been made with regard as much to its spirit as to its letter, and while the functions of the office go no further than to collect and publish such information as will show the resources of the State for the purpose of attracting immigration, I have not hesitated to go beyond this and to take such steps as might be necessary to actually bring immigrants here if ever such an opportunity presented itself. That the movement which is to turn a large portion of the tide of immigration that annually comes to the United States, to Maryland, has actually been commenced, is now without question. A union of the best efforts and influences, all working to that end, make this inevitable. Too high a value cannot be placed upon the work done by the press of the State, that powerful agent for good when properly directed, in calling attention to the importance of this matter.

A Suggestive Correspondence.

A newspaper article descriptive of the resources of the State, which by request I prepared during the past summer, happily attracted the attention of the French Consul at Baltimore, and was sent by him to the editor of the Franco-American, a newspaper published in Paris, devoted to the

encouragement and promotion of the emigration of Frenchmen to the United States. The result was a very pleasant and most satisfactory correspondence between the editor, the Vicomte de Laplane, and myself. Being a matter of public interest, and as going to show what may be accomplished even where limited effort is involved, the correspondence is here reproduced :

71 RUE DE GRENELLE,
PARIS, *June 28, 1893.*

MR. A. B. HOWARD, JR.,
Chief of Industrial Bureau,
Baltimore, Maryland.

DEAR SIR:—M. de Gournay, French Consul in Baltimore, has been so good as to send us *The Baltimore News*, and we have read there with great interest what you say of Maryland's prospects.

We have done as to French emigration, (which is very rare and slow) exactly what you recommend. We engage to leave this country only those who have some means, who are steady, industrious and likely to succeed, no others. At this very moment there are a great many Frenchmen, first rate workers, laborers and so on, who are disposed to go to Maryland, and might be of benefit to the country. Would you be so kind as to put me in communication with a reliable agent who would give us the necessary information about the country, the professions and the particulars my countrymen will naturally require before taking any step towards departure?

We have already sent many wealthy people to California. Maryland is very much nearer indeed, and this would be a very important matter. If this agent might be entrusted to receive coming people, and settle them immediately at work, the success would prove a very great one. Frenchmen don't like to leap in the dark and emigrate less than other people.

Waiting your answer, I am, sir, yours faithfully,

VICOMTE DE LAPLANE.

To this letter I sent the following reply :

BALTIMORE, *July 15, 1893.*

VICOMTE DE LAPLANE,

DEAR SIR:—I have received with a great deal of pleasure your letter of June 28, and also a copy of *Le Franco-Americain*. I trust you will pardon my delay in not acknowledging them sooner, but many causes have intervened to prevent me from doing so. I am very much pleased that M. de Gournay should have sent you a copy of the *Baltimore News* containing my article, by which your attention has been attracted to Maryland, and thank you very much for your kindly reference to it.

I send you by this mail a copy of my report, from which, as you will see, the article was largely taken. It will furnish you in a general way information in regard to the State of Maryland, and I shall cheerfully give you by mail, from time to time, such detailed information as you may desire. I am deeply interested in the question of immigration, and regard it as the greatest essential for the development and successful culture of our farming lands. I gather from your letter, that we are in accord upon this subject. At any rate, our views are the same in regard to the character of the immigrants wanted here, and that is one of the principal things to be considered. The Frenchman so seldom leaves his country that I had not taken into consideration the possibility of securing French immigrants. Let me assure you, however, that none will be more welcome.

If, by our co-operation, any number of your countrymen can be induced to come to Maryland, we shall have accomplished a result which will be of mutual interest to both peoples. I see no reason why we cannot do this, but the only immigrants we need are those who will settle in the agricultural districts. Some of these should have sufficient means to purchase land, and others who have no means should come as farm laborers. There is an abundance of room for both.

This, as you will see, is a State office, my appointment being by the Governor. One of its chief objects is the encourage-

ment of immigration, and I will undertake all the duties of such an agent as you refer to in your letter, and supply you with such information as may be necessary, as well as receive any of your people who come here, and settle them agreeably and comfortably. But first I must know just what you desire. Let me know as soon as you get this letter whether any number of your people are really ready to come to this State, as soon as they are in possession of all the facts; what number you would be likely to send; what capital they would be likely to have; the quantity of land they would probably like to purchase, and as much in detail, what they would expect to find here, as you are able to tell me. I can then better advise you what we can do. But I have no doubt such arrangements can be made as will be thoroughly satisfactory to your people. We have an abundance of cheap land, ranging in price from \$2 an acre upwards, and adapted to the successful growth of all fruits, vegetables, corn, wheat, tobacco, buckwheat, oats, hay, &c. We have a fine climate, schools and educational institutions of all kinds, churches, and in every county either rail or water transportation. The Chesapeake Bay, one of the finest bodies of water in the world, and its tributaries, furnish unexcelled transportation by water, and give an unlimited supply of fish and crabs, while the oyster industry is one of the largest in the State. Men of small means coming here should purchase the land in small tracts, but for men with large capital who wish to go into stock raising, and who can purchase large farms there is also a fine opportunity. Some of the best thoroughbred horses and farm animals are raised on Maryland stock farms, and bring remunerative prices. The future of the small farmer is in fruits and vegetables. For the man of means, there is also a splendid opportunity for all kinds of manufactures in every section of the State. The manufacturing interests of Baltimore, the metropolis of the State, and indeed, of all the Southern States of this country, are rapidly increasing. Its advantages for manufactures, and the recognition it is receiving from business men of judgment and tact, is an assurance of its greatness as a commercial

and manufacturing centre. Returning for a moment to the question of agriculture, the soil is beautifully adapted to the growth of grapes. There are scarcely any grown here now, chiefly because our people know little or nothing about their cultivation. Those who know how to raise them would open up a new and remunerative industry.

As to the various professions I cannot conscientiously advise your people to come here with the hope of achieving success. They are all over-crowded, and the competition is very great. Of course a man of unusual ability is likely to succeed anywhere, but those seeking professional preferment would have to take all risks as to that. You might state these facts to your friend, of whom you speak in your letter, coupled with the fact that I regret I can give him no more encouragement.

In conclusion, let me say, that if your people are ready to come, they will be well and gladly received, and I will write you further as to matters of detail as soon as I hear from you.

Trusting I have given you in part at least, the information you desire, and that successful results may follow this correspondence so pleasantly begun, I am with high regard,

Very truly yours,

A. B. HOWARD, JR.

The following response came a few weeks later:

PARIS, *July 27, 1893.*

MR. A. B. HOWARD, JR.,

Chief of Industrial Bureau:

Dear Sir—I have received the First Annual Statistical Report of Maryland, which you were good enough to send to *Le Franco-Americain*. I have perused it with the greatest attention and believe that if such a remarkable work might be put before the eyes of all our countrymen seeking for a new home, it would be of considerable influence and profit.

Our old country is now no more what it was before. Agriculture, vineyards, industry, by overburden of expenses in guns and warlike preparations, are falling off every day. A great many people are seeking a new home, a new country, and knowing that the United States is the only country where our countrymen may hope to succeed well, we have founded *Le Franco-Americain* to teach them how to emigrate, and to give them honestly, without any exaggeration, true and reliable information about the places where they may settle with the greatest chances to succeed well and to live happy.

Now the result has proved that our idea was quite right. I can tell you that we receive every day fifty or sixty letters at least, all coming from small landowners, farmers, vinedressers, workmen and so on. We examine all these requests, and we allow only those who are honest people, who have some means, and whom we find able to do well, to start under our care.

You must not expect to see crowds of Frenchmen coming together to the United States or Maryland, as you see troops of Germans and Italians going to your parts, engaged by mercenary companies who don't care at all whether they succeed or starve. This would not be the way to succeed here. The Frenchman, like the lion, goes and travels alone. We have succeeded very well because we gave special attention to every one, his family, his age, his tastes, his faculties, his means, his profession. We have sent many people already to California, because M. Freeman, President of the Board of Trade there, is our friend, and has been so good as to take special care in meeting the Frenchmen coming from our parts.

The Frenchman is disposed to nostalgia, what we call "*le mal du pays*." Give him somebody whom he may trust, and he will do splendidly. More than money, he wants good mind, encouragement and so on, and if you can give this, some Frenchmen will do more work for you than you would do with 100 negroes.

It is necessary, then, that I may be able to say in *Le Franco-Americain*, as I say for California:

"I have reliable gentlemen ready to receive from our part all our countrymen going to Maryland. All those who can invest shall receive reliable information at Baltimore, etc.; all those who are only workmen may go with complete security and shall be received and placed, upon their arrival."

If I can speak in such a way, nobody will go any more to Canada, because the winters are too long and nothing good can be done there in the agricultural line. In spite of our Californian friends and their good will, the expenses of traveling are too heavy and deprive our people of a great part of their resources. Many farmers, small capitalists, vinedressers and workmen (very good) will certainly go to Maryland, sent and directed by ourselves.

Now, which is the best place in Maryland? Which is the more profitable, tobacco or grapes? It would be very important to give us a definite plan; or many little plans well traced.

Is the climate of Maryland without any winter at all? It would be necessary to explain this point and give us the names of every landlord ready to receive farmers, partners, pupils, workmen, etc. Now that many French gentlemen of good families can no more get any public functions on account of the peculiar intolerance of our French Republicans, we receive many applications from wealthy families seeking employment and occupation for their sons.

In short, I repeat this, because this is the strong point of success; the Frenchman wants a special care for his own person and his interests; he is not so steady as the German, but will do better work if properly managed.

The moment is very favorable. Let me tell you, in ending this long letter, that I like America, and that one of my great uncles was a fellow-comrade of Lafayette. So I shall do everything to promote good understanding and friendship between our nations.

Yours very truly,

VICOMTE DE LAPLANE.

My reply was unavoidably withheld in order that I might transmit more detailed statements in connection with some land at once available for immigration, and which I accompanied with this letter:

BALTIMORE, *September 8th, 1893.*

VICOMTE DE LAPLANE.

DEAR SIR:—I regret exceedingly my unexpected delay in replying to your valued letter of July 27, and beg that you will accept my apologies if it has caused you any inconvenience. It has been impossible for me to write to you sooner for the reason that my efforts to secure detailed information for you, did not meet with the immediate success that I supposed. Gentlemen here with whom I have been in correspondence and consultation since I received your first letter written in June, were very anxious to confer in regard to the matter and to go carefully over the principal points embraced in the correspondence between you and myself, in order that they might submit to me, and through me to you, something like a definite proposition. The result is embodied in two statements herewith enclosed to you, one in regard to the lands in Somerset county and the other in Charles county.

In these two counties the people have displayed a more active interest in this matter of immigration than in any of the others. They are exceedingly anxious to have your people come and settle among them. That is, only such as will take up our lands, and place them under scientific, close culture, with sufficient means to carry on the work. Of course, if men of wealth desire to come here for the purpose of locating manufacturing establishments and to invest their money in manufactures, lands or any business enterprises, there is abundant room for them, but I cannot advise that your professional men, in the sense that we understand, such as teachers, lawyers and men of that class, come here unless they are willing to take the risk of success. But for those who will engage in the culture of the soil, we can offer almost every inducement and encouragement for success. I assure you that our people are as much in earnest as yours; if they come here we will give

them a most cordial welcome. We will take them by the hand and help them in every possible way.

. As between these two counties, Somerset and Charles, I scarcely like to advise you. Your people will do well in either, and each has some advantages in which the other is lacking, so that conditions are about equalized. In Charles county there are Catholic churches convenient to all points; and while in Somerset there are none in the locality where these lands are for sale, Bishop Curtis, the Catholic Bishop of Delaware, an adjoining State, is close at hand and will give you every assistance desirable for facilities of that kind. I feel assured that if your people come to either or both of these counties, the mutual advantage to be derived will be great and far-reaching, and that it will be but the beginning of a movement which will bring many of your countrymen to settle among us. These lands have transportation facilities by rail and by water, and are adapted to the growth of every product of the soil known to this latitude. Charles county is within twenty-five miles of Washington, the capital of the United States, which is easily reached by land or water, and within a few hours ride of Baltimore, and of Annapolis, the State capital. There is an abundance of land for sale and of such character as to be utilized for the immediate production of the crops that are congenial to our climate. There is also much land that is easily susceptible of improvement, and with proper farming could be in a few years brought to a high state of cultivation. The former can be had from \$15 to \$40 an acre, while the latter can be bought as low as \$5 an acre. So far as the geographical and natural advantages are concerned, I refer to the copy of my report which you have. In regard to climate, we have of course, some very cold weather at times. The cold weather of last winter for instance, was almost world wide.

The severest winter weather here is in the months of January and February, but taking it altogether, winter and summer, our climate is healthful and delightful. In regard to your inquiry concerning the relative profits of tobacco and grapes,

I will say, that though our soil is well suited to the culture of grapes, our people have only to a slight extent gone into it, or used modern appliances in the way of experiment, but it is conceded that grape culture here would prove very profitable.

Our tobacco, if the proper care is exercised in its cultivation, is of excellent quality, and on fair land, with a moderate outlay for stimulating fertilizer, a man can produce from 1,000 to 1,500 pounds of tobacco—the quantity depending upon the season—which will sell on an average for \$7 per hundred pounds. This would make the gross income from an acre of land from \$70 to \$100. Charles county is one of the best tobacco producing counties. There is none grown in Somerset, though the lands are well adapted to it, and a great many years ago it was produced there with profit, and without doubt can be again.

Many of our people, without special care or convenience, earn a livelihood from poultry and dairy products, and careful research has shown that in no State of the United States can dairy farming be more profitably carried on. Our climate and soil contribute to the successful raising of all kinds of live stock.

Indeed, I am convinced that for the good of your people and ours, there is no better place to which they can come than this. You say you will not ask of me the trouble of meeting your people when they come to Maryland. Let me assure you that this will be no trouble, but a pleasure. As the agent of the State, I shall meet them upon their arrival, and carefully look after their interests and see that they are conveyed safely to their destination. You are perfectly safe in saying in *Le Franco-Americain* that you have "reliable gentlemen ready to receive all of our countrymen going to Maryland." Then, when they are ready to come, notify me in advance and I will guarantee to see that they are received and placed upon their arrival. Suppose you let your people come over, and some of them locate in Charles and some in Somerset. In every part of the State they can be just as well located, but I

have called your attention to these two counties, particularly, because they have been the first to submit to me a detailed statement in regard to the lands they have for sale and the prices. I speak for the whole State when I say that your people will be welcomed and assured success, no matter in what part of it they locate. The wages paid laborers are from \$10 to \$15 a month, but I am not sure that in the beginning, any large number of them can find occupation as laborers.

I shall take great pleasure in recommending *Le Franco-Americain* to all of my friends and correspondents here, and whenever I receive information from them which will be of interest and value to you I shall cheerfully send it to you. I hope that in reply to this letter you will be able to give me some definite information as to whether your people are coming and when we may expect them. I advise you that it is certainly best for them to come here before the winter sets in. Our people here have taken a great interest in this correspondence between us and are anxiously awaiting some definite results. After getting your next letter I hope to be able to give these to them, and to tell them when, and what number of your people will come and where they will locate. Hoping that this letter will be entirely satisfactory to you and that I shall hear from you again at your first convenience, I am

Very truly yours,

A. B. HOWARD, JR.

Since the receipt of the following letter, informing me of the illness of the *Vicomte de Laplane*, I have had no further communication upon the subject :

PARIS, *September 28, 1893.*

A. B. HOWARD, JR.,

Bureau of Industrial Statistics.

DEAR SIR:—Your letter of the 16th September, received. We regret to tell you that the *Vicomte de Laplane* is dangerously ill and may not recover. *Le Franco-Americain*, however, will keep up its publication and help the French people who may desire to go to Maryland, as well as to Texas or California.

I understand that you and your friends will receive the people going over and sell them land or rent the same. We give in our paper, which has a great circulation in France, all the particulars about California, as not only these people advertise with our paper, but receive them and help them.

We are going for instance, to have for the Kern and Tulare counties in California, in each issue a column of our paper showing the price of land, the price of a small house, what people going over with \$1,000 can do, &c., &c. They are going also to organize to have families to come together. It has been successful with California, as we send there every month twelve or eighteen people. The 10th of October, we send sixteen people on the same boat, straight to Los Angeles. Well, the contribution of the Los Angeles people to the paper has been very small.

We never charged them more than \$4 for one column when we speak of California, and, of course, when people write to us, we speak of their land and we send them to these people who have good lands for sale. Your people could do the same thing, and not in each issue, but once a month. People who have some land for sale could find some profit in doing so.

This is a mere suggestion on our part and you must not believe that we hope to make money in advertising at such a rate. We suggest to you the idea, as it has benefited others, it could be of some benefit to you.

We have already inquiries about Maryland.

Respectfully yours,

LUCAS.

My last letter, appended, closes this correspondence to the time of its date.

BALTIMORE, *October 31, 1893.*

Dear Sir—I beg to acknowledge receipt of your letter of September 28, and to assure you that I am exceedingly sorry to hear of the illness of the Vicomte de Laplane.

I am glad to know, however, that Le Franco-Americain will keep up its work. Your understanding that myself and my friends will receive your people coming here is entirely correct, and we stand at all times ready cheerfully to do this.

I think your suggestion in regard to advertising our lands in your paper is a most excellent one, and one that will many times more than repay those who do it. I am urging our people here who have lands for sale to adopt the same plan which you have showed me is in such successful operation in California, and I assure you it will be most gratifying if you can send to us as many people monthly as you send to California. I am placing your plan, either personally or by letter, before my correspondents, and so far they have received it most favorably, and I think it likely that they will adopt it.

I shall be glad to hear from you at all times, and, of course, you will let me know as soon as any of your people are ready to come to Maryland.

Very truly yours,

A. B. HOWARD, JR.

The facts contained in this correspondence were promptly laid before leading citizens of the counties where immigration is most desirable, and they elicited a great deal of interest. Detailed statements of the lands for sale, involving in the aggregate 12,388 acres were sent me and were promptly forwarded to Paris. It has been impossible in so short a time to conclude all of the arrangements necessary to bring any of these immigrants over before winter set in, but it is my belief that this correspondence has laid the foundation for definite results next year.

Another opportunity for securing a most desirable class of immigrants, which will receive my further attention at the proper time, is suggested in the following letter:

KRISTIANIA, NORWAY, *August 28, 1893.*

DEAR SIR:—Acknowledging the receipt of your letter of July 8, I beg to inform you that I think it will be too late

this year to give the emigrants the information, which might be desirable with regard to the conditions which your State can offer them. I therefore think, that the work must be based on the families, who think of emigrating to America in the spring of 1894.

I must first of all, point out that my business is quite private. I shall therefore, in case of a more extensive work, have to reserve to myself a proper compensation.

The best plan, I think, would be if you could give me full particulars as to the lands (with maps, &c.) which may be left to emigrants and the minimum prices and also full power to sell them, but reserving the right for the emigrants to inspect the lands, before they are finally bound. The usual commission on sale of estates is here 2 per cent., to which perhaps might be added a proper amount for advertisements, &c.

The best thing would of course be, if I in person could make myself acquainted with the lands, but the State would perhaps be unwilling to spend what it would cost. If favorable conditions can be offered, I have no doubt that there would be many persons who would prove excellent settlers for your lands among the large number of emigrants, who every year, especially in the spring, leave Norway to go to America, and in case you can make good offers, I shall be very glad to assist you in the best way. I am with best wishes.

Very truly yours,

O. DEHLI.

Mr. Dehli recently visited this office in connection with an inspection of the State Bureaus in the United States, which he was making under instructions from his government. At that time I interested him in this matter of sending his people to Maryland, and subsequently wrote him.

I shall take such cognizance of this entire correspondence as will tend to bring as many of these immigrants to this State as possible early in the coming spring, but to this end it is important that the State give more material aid to the prosecution of such a work.

New Methods Imperative.

That something will be accomplished in the direction of immigration, most thoughtful and observant men now believe; that something must be accomplished, if agriculture in Maryland is to hold out any inducements to those engaged in it, they are convinced. If this is not so the future is without hope, and sooner than continue a struggle against such odds, farming had better be abandoned. How can the farmer in Maryland expect to reap the reward of his labor under present conditions? When wheat and corn are below the cost of production, with nothing whatever to indicate, so far as we are able to forecast the future, that there will ever be any material advance in prices; when it is actually demonstrated that the straw from a crop of wheat brings more than the grain, and when corn has no value beyond its consumption at home; when, in nearly all the counties of the State, labor is not to be had at any price nor under any conditions, and when farms are unoccupied and daily depreciating in value, certainly men will agree that all these things are the result of improper conditions, and it is time for them to seek the remedy.

Therefore, it is true that there is no subject more opportune than this one of immigration; none to which the attention of the farmer could be more carefully directed, and none which, with proper efforts, will insure better results.

In Maryland and throughout the South, the subject of immigration for the development of our farm lands, is attracting the attention of the people and the press more than at any time past. It is one of the most hopeful signs for the future of our State that so much thought is being given this most important matter.

Not since the war, from which the present agricultural depression certainly dates, has the farmer in Maryland made any material change in his system of farming, and yet within that time, economic conditions have wholly changed; but the farmer, as a class, is not conversant with economic conditions.

and it is not therefore to be expected that he will heed them, or trace back to them the cause of his present troubles. He is painfully aware that "the times are out of joint." He knows that every year, almost as certain as season follows season, he is getting smaller and smaller prices for the products of his labor, while the wages he pays remain the same as when he got twice as much for his crops. He knows that in thousands of instances the lack of means and of labor render it utterly impossible to carry on the large farms of several hundred acres or more, and that, in consequence, his land, through disuse, is becoming more and more a burden to him, without benefiting others; but his ideas are vague as to the change of conditions which he feels would better his own condition and that of the community.

That the farmers' "lot is not a happy one," he is very sure. To make it happy is the problem he has not yet solved. Where will he find the solution? Clearly it will come only with a revolution of the present methods. The successful farming of the future is the farming that will be conducted on scientific principles; when land will be cultivated in small holdings; when every available inch of ground will be considered, and made to produce the greatest possible results, and when the farmer recognizes the necessity for diversified crops, which he certainly has not yet come to do.

That the only way in which this is to be done is by cutting up the large farms into smaller holdings, and adopting a more intensive system of agriculture, is so plain that it seems hardly to admit of an argument. This is what the thrifty immigrant will do. This is the system to which he is accustomed in Europe; a system which our own people find it so hard to adopt, for it is one of the most difficult things in the world to make people break away from long-established customs, under which they and those before them have operated so long. The farmers must be educated to the necessity for immigration, just as they have been on the tariff, and as they must be on all other questions of public policy. It is thus that all great reforms are accomplished, and all great reforms are of slow

growth. The farmer is slow of education in these things; he is not quick to adopt new ideas; he is cautious, conservative, and his mind "makes haste slowly." When he is once convinced of that which is right, he is anchored as fast as the adamantine rock.

The convincing process in this case seems to be a simple one. A large part of the land area of the State is untilled. It has been so for many years, and is annually increasing. To this proposition none will enter a denial; nor will they to this one, that it is so for the reasons enumerated. The question then is, whether this condition of affairs is right, or whether it is not right.

It may certainly be assumed that there will be no diversity of opinion on this point. If these untilled acres which are in large part grown up in bushes and briars and which show the evidences of neglect until the heart is sick and the mind asks naturally the question, "how long can this last?" are placed in the hands of honest and industrious immigrants who can handle them, can any one question the result?

These lands may be had cheap, they only need the application of industry, patience, economy and intelligence. Is it hard to draw the picture which such a change would make? How many farmers in Maryland there are with 200, 300, 500, and some 1,000 acres, which they can not work. For years they have worked only such part as their limited means have enabled them to struggle along with, abandoning the balance altogether, or what in many instances is worse still, renting to utterly incapable tenants who move from year to year and who must necessarily be regardless of the land except for what they get out of it. Too often the yield of two acres is that of what, under proper conditions, would be the yield of one acre or even less.

If the holders of these farms, reserving only so much land as they can improve and properly cultivate, would sell the remainder to immigrants for subdivision and high cultivation, can there be any room for controversy as to the result? Not

only would the benefits be seen so far as the improvement in the cultivation of the land is concerned, but in all the avenues of industry, improved conditions would follow the coming of immigrants to the sections now so sparsely settled. Buildings, and other improvements to the land would follow of necessity, advancing the general well being of the community and giving employment to labor. Railroads, and increased facilities for transportation of all kinds would come. People would be brought closer together and a greater community of interest would exist; the improvement of county roads, the building of villages and of factories, blacksmith shops and wheelwright shops, now so seldom seen in country neighborhoods, and everything made necessary by such improved economic conditions, apart from the increased value of the land and its products, would put more money in circulation and would bring about that interchange of commodities which belongs to a thrifty community.

Initiatory Steps.

The farmer is awakening to the necessities of the situation. He is interested in the question of immigration as he has never been before; but as yet only a few of them, those of more advanced thought, have reached an actual realization of the imperative necessity for more settlers. In a number of counties corporations have been organized for the purpose of securing lands that may be offered to immigrants at reasonable rates, and of pointing out to them the inducements and favorable conditions which await their coming. Such organizations in every county in the State, in the hands of proper men, cannot fail to bring the desired results. It is only in this way or by State aid that immigrants can be secured. There has yet been no organized or systematic effort on the part of the State to this end, though it is certainly desirable that there should be. Much can be accomplished without State aid, and there is every reason to believe, that in the absence of this, well planned efforts on the part of leading citizens in various parts of the State will be successful. Charles county was the first

to organize and equip a company for the purpose of securing immigrants, and the people there are alive to the importance of this matter. The same is the case with Frederick, Somerset and other counties, but it is in Dorchester county where the first actual results have been worked out through the most commendable efforts of the German Lutherans of this city. There, several colonies have been successfully established. These immigrants are composed wholly of Germans who settled first in Kansas and became dissatisfied with the rigorous climate and other adverse circumstances, with which they found it almost hopeless to contend. This work has been done entirely through church influence, and seems practically to have solved the problem of immigration to Maryland. It is expected by the pioneers in this movement that they will have within the next two years no less than two hundred families in Dorchester county, and without doubt the movement well rooted there, will spread to other counties.

The present condition of farm labor in Maryland alone, is sufficient to force men to the adoption of some change of system, and there is none which comes so near meeting all the requirements as immigration. The immigrant may come as a purchaser of the land or as a farm laborer, but the one to whom the best results may be guaranteed is he who will buy his little farm and do his own work. In the raising of fruits and vegetables, properly understood and handled and shipped to remote points, as with improved methods of transportation they can be, there is a field practically without limit. A Caroline county farmer made more from an acre and a half in raspberries than from forty acres in wheat. This is one of the many instances, but it serves to illustrate the possibilities in such a State as ours.

In a recent article treating of irrigation as applied to farm lands in the West, the writer uses these words:

—“Irrigation means new and better economic conditions. It means small farms, orchards and vineyards, more homes and families, with moderate means and greater comfort. It means more intelligence and knowledge applied to farming; more

profit from crops, more freight and commerce, because special products of higher grade and better market value will be raised. It means association in town life instead of isolated farms; it means telephones and telegraphs, good roads and swift motors, fruit and garden growth everywhere; schools in close proximity, villages on every hand, and such general prosperity as can hardly be dreamed of by any one individual. To achieve it more readily, intellectual understanding, business direction and scientific organization should be given to the great movement now coming to the front for the development of enterprise and progress."

For "Irrigation" substitute "Immigration," and no words could better portray the situation in Maryland.

Some of the Plans Proposed.

There are a number of plans which, if properly executed, through private enterprise, would secure the class of immigrants desired, in addition to the county organization already referred to and the Lutheran movement so successfully inaugurated. All or most of these have for their central idea the purchase of large tracts of land on which the immigrants are to be settled. One which is worthy of attention has recently been put into operation in Nebraska, by a wealthy Ohio manufacturer. He purchased 12,000 acres in Nebraska. In the centre of this tract 160 acres are laid off for the village site, and in the centre of this, forty acres for a public park. Facing the park are the school, church or churches, public halls, stores, shops, etc. The remainder is cut up into 240 lots of about a half acre each, for dwellings for the farmers, storekeepers, mechanics and others who may seek a residence in the village. After providing for the village, the rest of the 12,000 acres is divided into 150 farms of about eighty acres each, with roads so laid out as to give each farm an open highway to the village. It is proposed to sell these farms on credit, giving ample time to the purchasers to pay for them, and to assist in the building of the village, by helping to build the schoolhouses, churches and such other public buildings as may be desired. If this idea is carried out, there will be a village with 150 families of farmers

and perhaps fifty or more other families of storekeepers, mechanics and others, say a village of 200 families, or 1,000 people, which would make a considerable place. It is suggested that land owners form joint stock companies, purchase a central tract for the village, build a church, a schoolhouse, a store, have a postoffice established, and then let those nearest the village site, either build, or if practicable, move their dwellings to the village site, thus giving it a start. Then subdivide the large farms into small ones, and invite settlers to come, purchase, and become residents of the village.

Another suggestion is to work through district organizations in the counties, and to raise the money to carry on the work; a part of this to be set apart for advertising, the publication of literature and such other means as would be necessary, to place before the people who would come to Maryland, if properly advised of all that is here offered them. It is abundantly shown that there are thousands of people in the West who are thoroughly dissatisfied with their conditions and surroundings there. We have had a direct illustration of this in the settlers who have recently come from Kansas to Dorchester county. But in order that more may come, they must know more about the State. Explain what can be raised here, what lands can be obtained for, what transportation facilities they can expect to find. Get the co-operation of the railroads in this work and secure reduced rates for intending immigrants. If necessary, pay the expenses of a train load of western people through the south, and the expense will be returned one-hundred fold. These, and other things which these merely suggest, might be done by the land owners of Maryland with good results. The railroads of the west have spent millions of dollars in securing immigrants in that section, and the people of our own State cannot expect good results without at least an expenditure of some money in advertising their lands, and that in the most thorough manner. For foreign immigration, capable agents in Europe are absolutely necessary.

None of these propositions to work through private organizations differ very materially. As great an essential to their

success as money, is a little well expended energy and determination, thorough organization and unceasing agitation. This Bureau has done all within its power up to this time, in the publication and dissemination of information showing the resources of the State, but it has been able to do little of either with the means given it.

As far as State aid bearing more directly upon the subject of immigration is concerned, there is no other suggestion than the establishment of a State bureau of immigration, with branches in each county, such as I have referred to in my first report. Those who have lands to dispose of could place them under the control of the bureau and a price for the land be fixed for a term of years, so that there could be no advance in prices upon the advent of a few immigrants, thus making it more difficult for those who may come later to secure desirable tracts. Maps should be prepared by this bureau of immigration so that settlers could tell accurately where the land is situated; and such other information should be gathered by the bureau as would be of interest to those who wished to come to our State. Arrangements should also be made to receive immigrants upon their arrival, and to provide them such temporary assistance as would in many cases be necessary until they reached their final destination.

Obstructive Speculation.

But the best way to secure immigrants is to secure them. It must be made easy for them to reach desirable lands without practically imposing a fine upon them. For this is what it too often resolves itself into when lands on which immigrants might settle are held above their present value, and beyond the means of the immigrant. The holding of land at a high price not alone has a tendency to deter settlers from coming to the State, but when they do come and are obliged to pay from \$35 to \$50 an acre for land, which, under the most intensive system of cultivation, will not yield fair returns to capital and labor, they are, in a sense, deceived. A great deal of land held at such prices will not yield a fair return on half

that amount. It is certainly as important to consider what is going to be done for the immigrant after he gets here as it is to get him. The land should be sold not only at such prices but in such quantities as will make it possible for the settler or the man of small means to acquire it, in ten, twenty or thirty acre lots, if necessary, and the quantity of uncultivated land would rapidly diminish. Now, too often, as much, and sometimes even double as much, is asked for the small holding as for the entire farm. Under this policy, land will continue to lie barren, the immigrant and the wage earner will be entirely precluded from elevating himself to the position he naturally desires, and the State becomes the loser.

As an illustration of this, an instance has been cited where a man wished to purchase ten acres of a 220 acre farm, the market value of which was about \$35 an acre. The price fixed by the owner for the ten acres was \$1,000, three times its actual value, and the man who wanted to purchase was told that in addition he would be required to pay the cost of fencing it in. This placed it wholly beyond his means and at once shut out all the benefits that would have resulted from the transaction.

This question of immigration, like every other public question, is directly connected with the question of taxation, and in this way: Whenever it becomes apparent to those land-owners, who are holding their lands out of use for speculative purposes, that immigrants want to settle in a certain section of the State, they immediately raise the prices of their land. The consequence is, that it is just that much more difficult for immigrants to secure a desirable place to settle, and the State of Maryland is deprived, to the extent that immigrants are excluded, of the benefits which would be derived, if the vacant lands are taken up.

If the State would tax these lands at this speculative value the good effect would at once be seen, in that they would be forced to their normal value, and the way made possible for an increased population where it is so sadly needed. The asser-

tion is generally made that farm lands are already bearing more than their just share. This is but a half truth, and as has been well said, "a half truth is a whole lie." Some farm lands are bearing more than their just share, others escape with less than their just share. Some lands are now bearing more than their just share, not only in the agricultural districts, but in Baltimore city as well; but there are thousands of acres of uncultivated land in Maryland which are held at high prices, their owners merely awaiting a time when the pressure of population will be so great as to compel purchasers to accede to the terms of the speculators. If the project of immigration is to be made a success, both for the State and for the immigrant, very much will depend upon the treatment he receives at our hands. He is not treated with the consideration he deserves if, when he comes for the investment of his small means, the prices of land are placed beyond his reach simply because there is a possibility of selling it. He must have a helping hand and a welcome which will make him feel that he has come as an aid to the community, not as a burden. He must be encouraged to the proper appreciation of our customs, which he has shown himself so willing to adopt, and helped to a proper education in the duties of citizenship.

Uncultivated Areas.

When the people of Maryland are brought to a proper conception of the enormous area of uncultivated lands in the State that are susceptible of being brought to the highest state of production, they will stand face to face with all that immigration in its best sense means. From this point they are unfortunately yet too far away.

A statement showing these lands can only be made with absolute accuracy when the Legislature sees fit to expend a sufficient sum of money for a survey of the State and a farm to farm enumeration. But the best possible estimate, and the only one that can be made in the absence of these two things, is the result of the investigations made by this bureau. These figures are based upon returns to the most careful and detailed

inquiries, received from the most capable and reliable men in every county of the State, and from the agricultural organizations whose knowledge of the subject makes their judgment worthy of acceptance. It is well to say that the figures given are in no sense an exaggeration, but that preferring to err on the side of caution they underestimate the actual area. By this estimate :

The present total area of land under cultivation in Maryland is 2,885,728 acres.

The total area of available agricultural land in Maryland that is not under cultivation at present is 2,407,340 acres.

The total available agricultural area in Maryland is 5,293,066 acres.

The present area of uncultivated lands that could be brought into cultivation either by drainage or by other means is 766,645 acres, of which 688,645 acres are woodland.

The area of swamp, marsh or wet lands, is 78,000 acres. There is in addition, however, a considerable area of swamp lands, of which it is difficult to give any estimate, but probably as much as 25,000 or 30,000 acres.

No estimate can be made as to what proportion of these swamp lands is irreclaimable, but it is safe to say that the proportion is very small and that by a proper system of drainage and diking most of them can be reclaimed.

Valuable Marsh Lands.

That these lands will ultimately be among the most productive and valuable in the State is practically certain, for the new conditions rapidly arising will force attention to them, and consequently the application of the means to make their fertility available, will be hastened. In thirteen counties, or, more than one-half of the State, these marsh lands are found in varying areas. The counties are: Calvert, Caroline, Cecil, Charles, Dorchester, Harford, Kent, Prince George's, St. Mary's, Somerset, Talbot, Wicomico and Worcester.

Calvert, which is a narrow county lying between the Patuxent river and Chesapeake bay, has tidewater on both sides, with a considerable marsh area, none of which has been diked.

Caroline county has from 500 to 1,000 acres of tide-marsh on the east side of the Upper Choptank, which is used only for grazing and is valued at \$2.50 an acre, while upland in the same locality is worth from \$10 to \$25 an acre. None of the marshes are diked though it is a sufficient elevation above low water to afford perfect drainage.

In Cecil county, the only land banked from the tides was some ten acres of a farm lying on the Sassafras river. On account of muskrats, the owners gave it up and let the bank go down some eight or ten years ago. But little attention is given to the marsh lands.

The marshes in Charles county are worth about \$3 per acre, though none has been diked. Fine three-edged grass grows on the marshes, besides bulrushes, sedge, &c.

In Dorchester county, along the Nanticoke river, there are fully 5,000 acres of tide marsh, mostly used for grazing and are valued at from \$1 to \$5 an acre. The mud flats and low marshes sometimes produce wild oats and other grasses, making very good hay for stock and packing. No recent efforts have been made to reclaim the marsh lands, though many years ago, an unsuccessful attempt was made to use some of the land for rice and cotton.

Harford county has about 15,000 acres of tide marsh, much of which is owned in large tracts. The only vegetation is cat-tails and coarse grasses. The marshes are not there considered of any value, and no attempt, so far as known, has been made to reclaim them.

Though there is an abundance of marsh lands in Kent country, no efforts are made to utilize them. An expenditure of \$10 an acre upon some of these marshes would increase their value to \$100 an acre, but inasmuch as the upland in great part remains uncultivated, the owners of marshes do not

seem to be inclined to make the experiment. The marshes in Prince George's county are formed in the bends of the rivers, and are usually owned by those who own the lands bordering on them. Wild oats and other marsh grasses, cover these lands in summer, and they are only used for pasturage. When a farm contiguous to the marshes is sold, the marsh land is usually given in.

The marshes in St. Mary's county are very numerous, as the county is nearly surrounded by tidewater. The larger marshes have generally a stream of fresh water running through them. None of them are improved. There are supposed to be about 25,000 acres of marsh land in Somerset county, and but little has been done in their improvement. Many of them are taxed at about twenty-five cents an acre.

Many thousand acres of marsh are to be found in Talbot county, which might be reclaimed at small cost, but notwithstanding the favorable location, good quality, elevation above low water, and freedom from storm-tides, none of them have been diked. The vegetation is a coarse cane grass, reed, flag or cat-tail, and rush, and is only used as spring pasture. The marsh lands of this county are regarded as equal to any in the world, and with such treatment as the marshes on the Delaware get, would grow plentiful crops of corn and timothy.

Several thousand acres of marsh are found in Wicomico county, chiefly along the Nanticoke river. No reclamations are reported and there is nothing of peculiar interest about them.

Worcester is the only county of the State bordering on the Atlantic Ocean, and has many thousands of acres of marshes, none of which have been diked. Aside from the general causes which have retarded improvement in this State, the tidal action in the case of Worcester is not sufficient to secure drainage through sluices, a condition which will preclude reclamation without the use of machinery. There are some marshes in the county, however, to which this objection does not apply.

Area and Population.

The following table offers some valuable suggestions, chiefly as showing the sparsity of population in Maryland, and the remarkable fact that outside of Baltimore city the State is not supporting more than one-half of the population that it could comfortably do. The total area of the State, outside of Baltimore city, is 6,292,480 acres, with a population of only 607,951, an average of but little more than ten acres to each person, or about sixty persons to a square mile. This includes all the cities and towns in the State, (Baltimore of course excepted,) which, if included, would largely increase the per capita acreage.

Thus, with the area above given, including towns, with an area directly under agricultural cultivation of nearly three million acres, an available agricultural area not under cultivation of over two million acres, and a total available agricultural area of over five millions of acres, the State has a population of but little over 600,000, when it could support with ease twice that number, or at least 1,000,000 people, more especially if improved methods of agriculture were adopted. Baltimore city, with thirty-two square miles, has a population of half a million, while the balance of the State has 9,828 square miles, with but little more than the same population. As showing the density of population in other communities, that of Saxony is 442 persons to the square mile; Belgium, 441; England, 422; Netherlands, 291; Italy, 234; Japan, 233; India, 132; and China, generally supposed to have a denser population than any of these, 119.

Can anyone question the benefits which would come from the influx of wealth producers whom this opportunity awaits, each one a consumer as well as a producer, working not alone himself, but giving work to others? If it is urged against him, as is often the case, that he is but one more to be fed, clothed and housed, does he not in turn help to feed, clothe and house others? His wants must be supplied, with increasing ratio to his general advancement in the social scale, and this means

more work for those who have to supply these wants, in all the avenues of trade. It is immigration such as this, that will benefit the community to which it comes, each immigrant making it the richer by an intelligent brain and strong arm.

Table showing the population, land surface, size of farms and price of farming lands in each county in the State.

COUNTIES.	Population.		Area in Acres.	Area per Capita Acres.	Size of Farms. Acres.	Price of Farming Lands.
	White.	Negro.				
Allegany	40,135	1,436	305,280	7	25 to 2,000	\$2 to \$100
Anne Arundel..	19,580	14,514	256,000	8	100 " 600	5 " 200
Baltimore.....	62,679	10,230	398,080	5	10 " 500	20 " 500
Calvert.....	4,796	5,064	139,520	14	20 " 500	2 " 20
Caroline.....	10,092	3,811	201,600	15	10 " 500	5 " 75
Carroll.....	30,241	2,135	272,640	6	25 " 300	15 " 75
Cecil.....	20,850	4,001	240,000	9	2 " 500	10 " 150
Charles.....	7,054	8,137	294,400	19	150 " 2,000	1 " 50
Dorchester.....	16,133	8,710	390,400	16	100 " 200	10 " 40
Frederick.....	42,983	6,529	405,120	8	50 " 100	20 " 100
Garrett.....	14,028	185	435,200	28	50 " 250	10 " 30
Harford.....	22,617	6,376	270,080	9	50 " 500	25 " 100
Howard.....	12,159	4,110	160,000	9	50 " 500	25 " 75
Kent.....	10,664	6,807	201,600	11	100 " 500	10 " 100
Montgomery ...	17,500	9,685	325,120	12	50 " 1,000	15 " 100
Prince George's.	14,867	11,213	307,200	12	50 " 500	10 " 100
Queen Anne's...	11,904	6,557	225,280	12	100 " 500	10 " 75
St. Mary's.....	8,153	7,666	230,400	14	50 " 1,000	4 " 75
Somerset.....	14,650	9,505	233,600	14	8 " 1,000	10 " 50
Talbot.....	12,248	7,488	182,400	9	100 " 500	10 " 75
Washington	37,274	2,508	278,400	7	75 " 300	10 " 150
Wicomico.....	14,731	5,199	236,160	12	100 " 500	5 " 100
Worcester.....	13,012	6,735	304,000	16	100 " 600	5 " 50
Total.....	459,350	148,601	6,292,480	*10	.....	.....

*Average.

Diversified Agriculture.

Closely connected with this question of immigration and agricultural prosperity, is that of a diversity of crops. Attention has been directed to that in the preceding pages of this report, and also in the first annual report, in which were

enumerated most of the products to which Maryland soil is congenial. Sentiment is rapidly coming to recognize the importance of this change.

Reference has been made to the advantages of Maryland for grape culture. A valuable object lesson for this State is furnished by the figures of the New York grape crop for 1893. Western New York is the largest grape growing region in the whole world, and for the extension of their market in 1893, the growers sent fifty car loads of Concord grapes to England. The success of the California fruit in Europe encourages them in the belief that a new and practically unlimited market will be open there. There are in Western New York, 50,000 acres of land used for the cultivation of grapes. The crop for 1893 was 8,070 car loads, or 25,000,000 nine-pound baskets, the largest yield on record. The picking of these grapes gave employment to 20,000 people. The figures given show the profits to a grower: A man who owned 225 acres of vineyard, rented twelve acres of land thirteen years ago, to a man who planted and cultivated the vines for half the crop, the owner furnishing vines, posts, wire and half the baskets. The renter wanted to buy the vineyard after ten crops had been harvested, and offered the owner \$600 an acre for it. After consulting his diaries for the thirteen years, the owner found that the twelve acres had paid for the vines, posts, wire, baskets, taxes and costs of fertilizer, and had further paid the interest on \$1,000 an acre—all out of his half of the crop. His profits for the thirteen years were sixty dollars an acre above all expenses, from the time the vines were planted, and no crop at all was harvested the first three years till the vines were full grown.

It is certain that just as good results as these are possible in Maryland with the application of proper efforts. The French and German immigrant are equally at home in the cultivation of the vine, and there is no doubt could turn thousands of acres in Maryland now uncultivated, to profit in this way.

The cultivation of the English walnut in Maryland would be a source of profit of which few people have any conception.

In some of the counties, chiefly on the Eastern Shore, there are a few scattered trees which were never planted with a view to profit, yet from which the returns are in some instances sufficient to pay the taxes on the farm. In California they are grown largely and are one of the most profitable products. An idea of the profits is conveyed by the fact that the crop of California for 1890, was 1,500,000 pounds, which represents a total income to the growers of \$170,000. Many ranch-men in the vicinity of Downey and Rivera, California, average from \$225 to \$350 an acre upon their crop.

Up to 1892, there were 15,120 acres devoted to walnut growing in California, of which 6,728 were productive, and 8,392 had not come into bearing. The Los Nietos and Ranchito Walnut Growers' Association in 1890, handled the product of forty-seven growers, amounting to 761,019 pounds, for which was received \$59,611.84. In 1891, the crop of fifty-one growers was 702,469 pounds and brought \$58,020.83. Of course, there are other growers besides those in the association mentioned, whose product goes to swell the grand total above mentioned.

The English walnut is called by some, the Madeira nut, and by others, the Naples walnut. It takes these names from the different locations where it is cultivated. It is really of Persian origin and ought to be distinguished by that name only. It is said to be true to its seed when planted, although in the planting of great quantities of seed the fruit may be somewhat different, that is, the shell may be harder or softer than the nut planted, but the kernel remains the same in flavor. The soft and medium shell nut have each their advocates, and much may be said concerning them, some cultivators preferring one variety and some another, but it is a notable fact that quite a number have discontinued the planting of the soft shell nut and plant only the medium one.

The tree begins to bear in Persia, eight years from the planting of the seed; in Italy, Spain and the Island of Madeira, in about sixteen years; in France, the southern part, in eighteen years; in England, twenty-four years; in California, eight

years: Some cultivators have claimed their trees to bear in less than eight years, but, if so, they have done better than in the place of their nativity, Persia. Very limited experience in Maryland, shows that here they come into bearing in seven years.

In the cultivation of this fruit, it is generally conceded to be best to get the trees from the seed or seedling, in preference to grafted or budded trees. Not much can be gained by budding or grafting, unless it is desired to change the variety, as the tree comes in bearing as soon as its size could possibly make it profitable. Much has been written about the location and soil best adapted to the planting of the walnut, some asserting that it will grow anywhere—on rocky and uninviting hillsides, on stiff clay, and adobe lands—in fact, any place, yet, though it is admitted that the tree is a hardy one, it should be planted to secure most speedy and profitable results, on deep, rich loam, with no hard pan, stiff clay, or impenetrable soil nearer than twelve feet. Locations naturally moist are to be preferred to those requiring irrigation. A temperature of from sixty to eighty degrees in summer, is regarded as the most favorable, though they have been known to thrive in hotter climates.

The distance which it is best to maintain for planting is about forty feet, and this distance will do for one hundred years with judicious pruning. As for their age, it is said they are long-lived, like the oak, and as hardy, and under proper conditions will produce fruit for a thousand years. The fruit is cured in dry-houses by artificial heat, the latter being sufficient to evaporate the water and set the oil in the nut. When this is done the nuts will remain sweet for an indefinite time. Some were kept as an experiment for five years, in a concreted storehouse, and at the end of that period were as sweet as when first cured.

In preparing them for market some use a sulphuric mixture which bleaches the nut and gives them a nice, bright appearance, but, it is asserted, affects the keeping quality as well as

the taste of the fruit. There is a washing apparatus, however, which is harmless, and which can doubtless be obtained from dealers in such things.

But there is little doubt that the planting of English walnut trees might be made to supersede peaches in many sections of the State, to the pronounced advantage of the planter. One of the most striking exhibits from California, in the Agricultural Building at the World's Fair, was a huge glass case in the shape of a pyramid, filled with English walnuts.

In many sections of the Union, agriculture is being successfully diversified, not only with regard to the products of the soil, but stock raising is taking the place of the growing of crops that have heretofore monopolized the attention of the farmer. This is notably the case in the northwest, where the raising of live stock, more particularly sheep, and dairying, have supplanted grain growing.

In Montana, for example, sheep-raising has increased tenfold in ten years, and in 1891, there were 2,800,000 of these animals in that State. The capital invested amounted to \$20,000,000, and a revenue of \$2,500,000 is derived from the wool alone, which has already obtained a national reputation.

North Dakota is another State that has recently devoted much attention to this industry, and has now more sheep than all the other domestic animals combined. Though this industry has only received attention for a few seasons, the capital invested amounts to \$5,000,000, and the flocks to 600,000. The cost of keeping them amounts, on the average, to about \$1 a head, while the average fleece is about eight pounds. Thus, it is seen that the cost of supporting the flock is paid for by the wool, while the natural yearly increase of the flock remains as a clear profit. The business is growing rapidly in that State.

The sheep industry in Minnesota is not yet as extensive as some other branches of stock-raising, yet a recent report states that no less than 400,000 sheep are in the State with an average wool clip of seven per sheep. Much of the sheep raised in Minnesota is used for mutton, and it is reported that this industry pays the farmer better than any other class of

stock. The average increase in a year is about 95 per cent., and the cost of keeping is about the same as in North Dakota.

Here is certainly a subject worthy the serious consideration of the farmers of Maryland, where the estimated number of sheep is about 165,000. Our climate is well adapted to the raising of sheep, but the great obstacle to success is found in the worthless dogs, which have long ago become such a terror to the sheep-raiser as to compel him to abandon all further efforts, and to prevent any attempt on the part of those who would otherwise engage in this profitable industry. A great deal of attention has recently been attracted to this matter, and to the advisability of some legislation for the protection of the sheep. This is only to be done by a well administered law imposing a tax on the dogs. Such a law as this has invariably encountered the most bitter opposition, and for that reason it has been difficult to pass it, and wherever it has been passed, has been wholly inoperative. The chief need for the enforcement of such legislation in a healthy public sentiment, which, there are some hopeful indications, is beginning to be aroused. In Connecticut, the sheep-breeders have formed a State association, and are inaugurating an active and systematic campaign in furtherance of their efforts to promote this industry. Blank forms printed with addresses and return envelopes have been sent out for the assessors of every town in the State. The returns will give the number of sheep assessed in 1893, their value, the number killed by dogs, amount paid by the towns, and the dog tax collected. Information is also asked as to the estimated number of acres of pastures lying waste that are suitable for sheep-raising. The object is to secure such legislation as is necessary to build up this industry and give protection against dogs.

Mineral Resources.

The mineral resources of Maryland are much larger than is generally supposed. The minerals which are now being mined are the copper ores—purple copper, vitreous copper (sulphide), copper pyrites, malachite and black copper—in Carroll, Fred.

erick, Baltimore and Harford counties; the iron ores—chrome, hematite and limonite—in Cecil, Montgomery, Baltimore, Harford, Howard, Allegany, Frederick, Carroll, Washington, Prince George's, Anne Arundel, Worcester, Somerset and Caroline Counties; porcelain clay in Cecil, Anne Arundel, Charles, Harford and a number of other counties; coal in Allegany and Garrett; fire clay in Alleghany, Cecil and other counties; flagging stone in Frederick; granite in Baltimore, Howard, Cecil and Anne Arundel; marble in Baltimore, Frederick, Carroll and Harford counties, including the green serpentine marble in Baltimore, Harford and Cecil; marl in Kent, Cecil, Prince George's, Charles, Talbot, St. Mary's and Calvert; silica in Calvert; sandstone in Allegany, Montgomery and Frederick; roofing slate in Frederick and Harford; carbonate of zinc in Carroll, and zinc blende in Baltimore and Carroll counties.

The minerals which exist, but which are not yet mined so far as is known, are asbestos, lignite, French chalk, soapstone and emerald nickel in Cecil County; silicate of zinc, cobalt ore, silicate of copper, gold, cobalt pyrites, magnetic iron ore in Carroll; emery asbestos, galena, gold, black lead, molybdenite and magnetic iron ore in Baltimore county; native copper and galena in Frederick; gold, lignite, manganese ore, black oxide of manganese, French chalk and soapstone in Montgomery; fire and brick clay, iron stone and black band ore in Allegany; pyrites, soapstone, tripoli—a deposit from five to thirty feet thick—in Anne Arundel; lignite, pyrites and gypsum in St. Mary's. With the necessary capital and mining experience many, if not all, of these minerals can be, and without doubt will be successfully worked in the future.

The white building marble of Maryland is the best in the world. The Beaver Dam marble quarries in Baltimore county are now sixty feet deep, and are worked over a surface of five acres. The Verde Antique or Green Serpentine marble has no equal in the United States for ornamental and polished work.

The granite industry is a very large one in Maryland, the average annual output being about \$15,000,000. There are

twenty-five firms in the State employing 1,000 or more men. As technically known, biotite granite is quarried in Baltimore, Howard and Montgomery counties: biotite gneiss in Baltimore and Cecil counties, and gabbro in Baltimore county.

Promise of the Future.

A proper appreciation of the diversity of Maryland's resources and of its almost limitless capabilities, must bring the conviction that before it lies a period of unexampled prosperity. This is no mere random assertion, but a statement which has the truth for its warrant. It is borne out by every line of investigation; it is attested by all present conditions. In all the avenues of trade, the spirit of progress is manifesting itself in such a way as to give assurance of a future of renewed endeavor and gratifying achievement.

Maryland's advancement in the quarter of a century and more since the civil war has not been commensurate with its advantages. In the ever-increasing struggle for industrial supremacy, it has not in the past kept pace with some of its rivals, but this is directly traceable to the almost inexplicable blindness of our own people to the wealth of resources and advantages right within their grasp. In plain words, the people of Maryland are unmindful of the possibilities of their State. But the day of their awakening is at hand—not only have they shaken off the lethargy of years until with a vision clear and unimpeded, Maryland looks out upon the commercial horizon, laden with all its grand possibilities, but others are eagerly seeking it, at home and abroad, as a field for investment unexcelled. Not only for the investor, but for the home-seeker, it has inducements surpassed by no State in the Union.

To the product of field and forest, of mine and mill, are added the essentials of domestic comfort, cheap homes, food products in abundance, and within the reach of all; churches, schools, and a mild and healthful climate, all these in short, presenting a combination of nature's handiwork and man's supremacy, the groundwork of the most substantial growth and lasting prosperity.

TAXATION AND ASSESSMENT.

Timely Subject for Inquiry.

The same reasons which influenced me in presenting this subject as a part of my first annual report make it eminently proper that it should again be given that consideration which a subject of such far-reaching importance ought at all times to command. These reasons apply with even greater force, now, in view of the fact that a session of the Legislature is at hand, and when the people of the whole State are looking to such an adjustment as will most nearly meet the popular demand and as will best serve the public good. It is perhaps well to call attention to the fact that the Bureau has been subjected to some slight criticism for giving any attention to the question of taxation, on the ground that this could not be logically included among the industries of the State. The criticism is not a well founded one, as a correct interpretation of the law establishing the Bureau must show. This law requires the Chief of the Bureau to collect "statistics and information concerning the various branches of industry practiced in this State, and the needs thereof, and to keep a bureau of general information."

Under a law so broad in its provisions, it is within the province of the Bureau to investigate almost every conceivable subject. A correct and fair system of taxation is certainly one of the needs of the industries of the State; in fact, it is considered by many intelligent and thoughtful persons to be the greatest need of any. Nothing so affects an industry as a tax unfairly laid, as is shown by the fact that the taxing power has been used to establish industries and has in numerous instances contributed very largely to their extinction. It is a subject close to every one, to the capitalist, the farmer and the laborer. For these reasons, therefore, it is perfectly correct to present such statistics and facts as are obtainable bearing upon this

subject, as well as to give to the public a synopsis of the arguments used by both sides to the controversy which is of so much interest to all.

It was my purpose, however, to make the inquiry this year upon entirely different lines from those of last year, my chief desire being to show a separation not only between real and personal property, but between the two kinds of real property, land and improvements, and the several kinds of personal property, in every county of the State. Such a showing, could it have been made upon the lines I laid down, would have been a valuable contribution to the economic literature of the State, and would have greatly facilitated the preparation of any legislation upon the subject. But the discouraging admission has to be made, that for causes wholly beyond the control of the Bureau the investigation was a failure, in so far as the attainment of its main object is concerned. But a valuable lesson is to be drawn from the very failure, scarcely less so, when viewed from one standpoint, than would have been shown by a presentation of the figures sought to be obtained, for, first, it illustrates as clearly as anything could, the importance of providing the Bureau with the necessary resources, and second, it must remain as a commentary upon the crude and hopelessly involved system of keeping the tax books in this State. For while it is true that the work could have been done had the means been at hand, it could only have been at an expenditure, in the present condition of the books, hardly to be justified, while on the other hand, with properly kept books it would have been reduced to a simplicity involving an almost inappreciable expense.

What the Books Reveal.

For the purpose of securing the information, such an examination of the books was made in every county of the State as was necessary to ascertain the nature of the work. Upon the very threshold of the inquiry it became evident that the condition of the books effectually barred the way to further pro-

gress, except at an expense greatly beyond the fund to the credit of the Bureau in the State Treasury, and an outlay of time that would have made it impossible to incorporate the results in this report. The extent of such a work, covering twenty-three counties, is without difficulty apprehended, more especially when in more than one-half of them, no information whatever was obtainable without an examination of each individual ledger account on the books. In all of the counties, with two exceptions, the books are kept in substantially the same manner; that is, a ledger account is kept with each individual taxpayer, and he is charged with every kind of property upon which he pays taxes. In order, therefore, to ascertain just what amount is in each county on the taxable list, it is necessary to go over each account and make an abstract therefrom.

The books are the same that have been in use for the past seventeen years, or since the last assessment, and in many cases they are admittedly beyond the explanation of the clerks themselves. Subject in all these years to the errors of successive clerks, no one being able to explain the mistakes of his predecessor, as they will frankly say, there is small wonder that it is so. In some counties, the clerks say that an examination such as the one attempted, would require at least a year, and could then only be made by a man familiar with the books, or at least, as familiar as any one can be; and even then the results would only be approximate. The minimum cost of such an investigation would have been an average of \$100 for each county. So it is seen that such a condition of affairs is inseparable from a system which has been in operation for so many years.

The two exceptions noted are Prince George's and Cecil counties, where the amounts are kept in books especially ruled and printed for the purpose, and each kind of property is set down in separate columns under their respective heads. From these books it was the work of but a few minutes to ascertain precisely the amounts of each kind of personal property and of real estate. There is but one improvement that is needed

in this connection, and that is a separation of the real estate into "land" and "improvements." If this were done, it could be seen at a glance what class of property paid the greatest proportion of the taxes and what relation this property bears to the real amount in existence. It is often asserted that certain kinds of property escape their just share of taxation under the law, but there is no one who can say just what the amount is.

Now, it has been at various times and by several statisticians shown, that the value of the land in any given community is pretty accurately reflected by what is upon the land in various shapes. That is to say, the value of the improvements to land, such as houses, barns and farmers' crops, together with the tangible personal property, is generally about the same as the value of the bare land itself. If this be true, and we have the highest authority for it, all that it would be necessary to do would be to ascertain the total value of the land of the State, and if the other classes of property did not reach this amount, the difference would very nearly represent the amount that is escaping taxation under the present statutes.

No less interesting would it be to show these facts aside from the above reason. They have never yet been shown in a public report, so far as I am aware, and there is no person in the State who can give any fair estimate of the value of the property located here. This anomalous condition of affairs could be easily remedied by a change of system in the County Commissioners' offices throughout the State. If all used such books as those used by Cecil and Prince George's counties, with the additional separation before referred to, no one need be ill-informed on this important subject.

In Cecil county, the following separation is made of the various kinds of personal property: stock in trade, \$377,180; stocks, \$30,322; private securities and bonds of other States, \$154,780; live stock, \$693,470; farm implements, \$274,064; household furniture, \$443,558; plate, \$6,696; money on deposit bearing interest, and property of other descriptions, \$84,265.

In Prince George's it is as follows: stock in trade, \$91,720; private securities and bonds, \$57,165; live stock, \$355,675; household furniture, \$196,524; plate, \$10,983; bank stock, \$24,508; public securities, \$40,658; farm utensils and tools of mechanics and manufacturers, worked by hand, \$2,325; railroad and other stocks, \$501,452; residue, \$108,361. The totals of both of these are given in the following table:

Table showing the amounts of real and personal property in the various counties, for State purposes, for 1892.

COUNTIES AND CITY.	Real.	Personal.
†Allegany.....		
Anne Arundel.....		
Baltimore City.	†\$209,889,399	†\$73,826,005
Baltimore.....		
Calvert.....		
Caroline.....	3,409,081	1,013,672
Carroll.....		
Cecil.....	12,104,678	2,064,355
Charles.....		
Dorchester.....	4,626,714	1,727,713
Frederick.....	18,906,161	6,024,293
Garrett.....	3,731,631	715,677
Harford.....		
Howard.....	*4,800,000	*3,000,000
Kent.....	5,964,826	2,013,487
Montgomery.....	9,518,145	2,225,150
Prince George's.....	8,424,776	1,389,371
Queen Anne's.....		
Somerset.....		
St. Mary's.....	*2,174,253	*579,188
Talbot.....	7,114,418	2,157,497
Washington.....	*13,000,000	*6,356,032
Wicomico.....		
Worcester.....	3,464,642	1,359,614

* Estimated.

† In Baltimore city there is no separation of real and personal property subject to the State tax, but there is a separation of the property subject to the city tax, and the figures given by the Appeal Tax Court show that the personal property subject to city taxes is about 26 per cent. of the whole taxable basis for city purposes. By taking that proportion of the basis for State purposes, this estimate is obtained.

‡ From the counties left blank, no information was obtainable.

The United Census Department attempted a similar investigation for the year 1890, and in cases where accurate figures could not be given an approximation was made by either the Census Department or by the clerk to the county commissioners. As one of the latter said to an agent of this Bureau, "the guess is as liable to be wrong as right." The table, however, is given, and each one can form his own estimate of its value:

Statement showing the assessed valuation for county purposes of the State of Maryland, by counties, for 1890, as prepared by the Division of Wealth, Debt and Taxation, Eleventh Census U. S.

COUNTIES AND CITY.	Total.	Real Estate.	Personal Property.
Allegany.....	\$18,668,052	a \$14,561,081	a \$4,106,971
Anne Arundel.....	10,134,977	b 9,034,977	b 1,100,000
Baltimore City.....	278,249,691	209,553,077	68,696,614
Baltimore.	49,212,234	b 39,212,234	b 10,000,000
Calvert	2,080,300	1,530,225	550,075
Caroline	4,466,267	3,409,081	1,057,186
Carroll.....	16,998,448	b 14,988,448	b 2,000,000
Cecil.....	14,619,362	11,940,594	2,678,768
Charles.	3,413,642	2,701,278	712,364
Dorchester.....	6,191,835	4,591,138	1,600,697
Frederick.....	23,030,356	18,306,984	4,723,372
Garrett.....	4,447,307	3,731,699	715,608
Harford.....	13,332,007	a 10,398,965	a 2,933,042
Howard.....	7,918,000	6,410,898	1,507,102
Kent	7,963,677	6,292,758	1,670,919
Montgomery	9,827,985	7,900,665	1,927,320
Prince George's.....	9,005,217	8,211,539	793,678
Queen Anne's.	7,307,420	a 5,699,788	a 1,607,632
St. Mary's.....	2,830,923	2,174,253	656,670
Somerset.....	4,235,863	b 3,388,690	b 847,173
Talbot	8,778,026	6,989,531	1,788,495
Washington	17,934,912	a 13,989,231	a 3,945,681
Wicomico.....	4,198,439	b 3,248,439	b 950,000
orcester.....	4,659,837	a 3,634,673	a 1,025,164
Total.....	\$529,494,777	\$411,900,246	\$117,594,531

a. The division between real and personal property is estimated by the census office.

b. The division between real and personal property is estimated by the officers of the respective counties.

Constitutional Amendment.

At the recent Tax Conference held in this city, as a result of the agitation upon this question, the following report was prepared by a committee appointed to draw up resolutions for submission to the Conference:

"1. That they have carefully considered all the resolutions referred to the committee.

"2. That in the judgment of said committee the most equitable and just system of taxation is an income tax, as in that way the burden would fall upon those who are best able to pay.

"3. That a majority of the committee can not recommend the passage of a law imposing a direct inheritance tax upon the estate of deceased persons, the present collateral inheritance tax being, in their opinion, sufficient.

"4. That in the opinion of the committee the public demand for the system of taxation known as the 'Home Rule' plan is such as to require of the committee a recommendation that an amendment to the 'Fifteenth Article of the Bill of Rights' be submitted to the people of the State, in order to obtain the sense of the people on that subject.

"5. That a majority of the committee are of the opinion that the next General Assembly of Maryland should pass the above amendment, but that it would be unwise to call a special session of the Legislature for that purpose.

"6. That in our opinion, in any change that may be made in our present system of taxation, special regard should be had towards securing for the State, at as early a day as possible, sufficient revenue from special sources, as franchises, corporation taxes, licenses, inheritance taxes, etc., as will do away with the necessity of the levying of a direct tax upon either real or personal property."

These resolutions were reported, but never reached a vote.

The recommendation of this committee in favor of a constitutional amendment is urged by those advocates of a new system of taxation, who believe that a change in the funda-

mental law of the State is the only real solution of the question. In the case of Charles A. Wells and others against the Commissioners of Hyattsville, growing out of the single tax movement there, the Court of Appeals construed the Fifteenth Article to mean that all classes of property must be included in the taxable basis, unless the Legislature may decide, "when State policy and considerations beneficial to the public justify it, to exempt, within reasonable limits, some species of property from taxation." This decision is asserted by some to leave the question still unsettled, and by others that under it no considerable exemptions can be made.

The opponents of any change in the Bill of Rights, maintain that the question has been settled by the vote cast in 1891, when 38,118 persons voted against the amendment and 32,211 persons voted for it. Those favoring a change in the Bill of Rights, however, decline to accept that vote as final in the matter, especially in view of the fact, that only 36 per cent. of those who cast their ballots for Governor that year, voted on the question.

In this connection an interesting table is presented, showing the number of votes cast by all the political parties contesting for Governor, together with the number cast for and against the constitutional amendment, known as Amendment No. 3. From this table it will be seen that 192,047 votes were cast for Governor in the State, while but 70,329 were cast for and against the amendment, or, 36 per cent. of the total vote. In only two counties did the vote on the amendment reach 90 per cent. of the vote cast for Governor. These counties were Caroline and Talbot. In Anne Arundel, but 6 per cent. of the vote cast for Governor was recorded on the amendment, followed by Calvert, with 7 per cent.; Cecil, with 10 per cent.; St. Mary's, with 13 per cent.; Charles, 16 per cent., and Prince George's, with 17 per cent. Even in Baltimore city, where voters have greater advantages for informing themselves, but 26 per cent. of the vote cast for Governor was recorded on the amendment.

Table showing the number of votes cast for and against the amendment to the Bill of Rights, and the relation that vote bore to the votes cast for the candidates of the various political parties.

COUNTIES AND CITY.	Vote cast for and against candidates.	Vote cast for and against the amend- ment.	Percentage of vote cast for and against amendment
Allegany.....	7,082	2,852	38
Anne Arundel.....	5,904	366	6
Baltimore City.....	72,250	19,173	26
Baltimore.....	10,920	5,347	48
Calvert.....	1,654	126	7
Caroline.....	3,247	2,951	90
Carroll.....	7,529	4,228	56
Cecil.....	5,246	529	10
Charles.....	2,877	483	16
Dorchester.....	5,604	4,715	84
Frederick.....	11,042	2,877	26
Garrett.....	2,752	1,372	50
Harford.....	5,918	4,332	73
Howard.....	3,200	1,546	48
Kent.....	4,139	3,349	80
Montgomery.....	5,623	3,282	58
Prince George's.....	5,034	905	17
Queen Anne's.....	3,740	789	21
Somerset.....	4,113	1,744	42
St. Mary's.....	3,256	435	13
Talbot.....	4,742	4,275	90
Washington.....	8,678	2,160	23
Wiconico.....	4,047	1,093	27
Worcester.....	3,350	1,400	41
Total.....	192,047	70,329	*36

* Average.

As nearly two-thirds of the voters of that year expressed no opinion at the ballot box upon such an important matter, its advocates believe that what is needed is a more active propaganda among the people, so that a better understanding of the principle may be had. There were doubtless, thousands who failed to vote on this amendment to the Constitution, because they had some doubt as to its effects.

A Congressional Inquiry.

A report made by a special committee appointed under a resolution of the House of Representatives, at the first session of the Fifty-second Congress, to investigate the question of taxation in the District of Columbia, is full of interest and instruction. The resolution recited a belief that there were gross inequalities in the assessment of taxes in the district, that discriminations were made in favor of certain sections and against others, and the committee was authorized to examine witnesses under oath, with a view to bringing out the facts.

The report made by the committee shows, "that the facts recited in the resolution were substantially true; that as a result of this investigation the assessment on land has been raised \$125,000,000, and yet \$225,000,000, more than half the value of land in the District, escapes taxation; that land values are increasing at an enormous rate—on a conservative estimate, to the amount of \$40,000,000 annually, enough to pay off the bonded debt of the District in six months; that the assessment of buildings and the under-assessment of land is operating to greatly discourage the growth and improvement of the capital; that the assessment has been made in violation of the law, without proper publicity or inquiry, and in a careless and reckless manner; and that on a fair assessment of land alone, it would be easy to obtain by a tax rate less than one-half of the present, all the revenue required for the needs of the District. This would make the tax rate of the city of Washington 60 cents on the \$100—a lower rate than that of any large city in the country."

These facts were elicited after an exhaustive examination of witnesses familiar with the subject, including representatives of large landed interests, one of whom was invited to act as counsel for the side of those interests, an invitation which was accepted. The committee recommended a change from the present system of assessment and the "bringing into it of the two principles of responsibility and publicity." "In place,

therefore, of the division of responsibility between three assessors, aided at times by a fourth, who are themselves appointed by the divided responsibility of three commissioners, we propose that the responsibility for the equalization of taxes in the District of Columbia, shall be concentrated in the hands of one clearly responsible officer, deriving his appointment from a clearly responsible source, removed as far as possible from the personal influences concerned with his functions; and that all his hearings, acts and decisions shall be matters of publicity and record. While the individuals interested to large amounts in keeping down the assessment on their own property, can be relied on to present their own side of each case before this board of equalization, one crying want in the present system has been the absence of anyone whose duty it was to represent the other side, nominally that of the Government, but in reality that of the smaller property-holders, whose individual interests are sufficient to enable them to give time and attention to the matter. This want we propose to remedy by the institution of an official whose duties shall be of the same nature as those discharged by the public prosecutors in our Courts, who shall call attention to property that escapes assessment or is insufficiently assessed, and who shall appear on the other side when applications are made for reductions of assessment."

The report continues :

Lack of Conscience in Taxation.

" But while your committee believe that the change in the manner of making assessments in the District of Columbia, which they herewith recommend, would tend to lessen inequality and conduce to a fuller and fairer assessment of land values, they find the belief very general that some change in the subject of assessment is of even more importance. In the last report of the assessor for the District of Columbia it is intimated that 'the public conscience is becoming somewhat elastic on the subject of taxation.' This is putting an obvious fact very mildly indeed. So far as our investigation goes, it would be a better expression of the truth to say that in matters of taxation there seems to be very little public conscience left,

and that the general sentiment is that no one is bound in honor or honesty to pay any tax that he can by any device escape from; and men whose word is as good as their bond, who would feel themselves disgraced in depriving a private creditor of a penny of his due, make no scruple whatever in defrauding the Government of its claim and shirking their responsibility for what is held to be their due to society in return for the benefits which they receive from society. At the bottom of this deplorable sentiment, we are convinced, lies a feeling not merely of injustice in the manner of levying assessments, but of injustice in their subjects; and in the minds of the thoughtful men who have appeared before us there is a general and most decided opinion that taxation for the needs of the District should be concentrated upon one subject, the existence and value of which can be readily ascertained and the justice of taxing which is perfectly clear. By law personal property in the District of Columbia is liable to the same rate of taxation as real estate, though the method of ascertaining it is different. But the attempt to tax personal property in the District has, as is the case in all the large cities through the country, degenerated into what would be a farce, if it were not worse. Taxes on personal property can be collected in sparsely settled farming communities, where every man knows his neighbor, and where the comparatively little that each man has is a matter of at least neighborhood notoriety; but though taxes on personal property may be collected from the poorer inhabitants of sparsely settled districts, they can not be collected from the rich in great cities; and in the District of Columbia, in spite of the rapid growth in population and wealth, and the settlement here of many men of large means, the returns for personal property have been falling off until they now amount to the preposterous sum of some twelve millions.

“Now, the attempt to collect taxes which it is thus obvious can not be collected, and as to which there is evidently a feeling that regards their collection as unjust, must, by its reactive effects render more difficult than it ought to be, the full and equitable assessment of taxes on landed property. And so it is with the assessment of taxes upon buildings and improvements. The value of the small and cheaply built house may be fairly estimated by a look from the outside, but the value of one of those costly edifices that are becoming so common in the Federal District, can not be told without close examination. A door, a pier glass, a marble floor, a stained window, a

carved staircase, in one of these houses, often has a value far greater than the entire homestead or hired residences of one who, among the great masses of our people, would be deemed well-to-do. Thus, without such prying examinations as are not contemplated by our system and are strongly repugnant to American ideas, anything like equality of taxation of buildings and improvements can not be attained."

City Docks as a Source of Revenue.

For many years, as a result of the agitation of the question of taxation, efforts have been made to find new sources of revenue. The most recent addition was the High License Liquor Law, which increased considerably the funds of both city and State. An explanation of the dock system in operation in New York city, offers a suggestion that may with profit be adopted here.

New York city is now the owner of at least one-half, and probably more, of the docks, and in time will be the owner of all; for the laws of the State give to the city the power to acquire gradually the wharf property not already in its possession, bonds being issued from time to time for the construction and repair of piers and the purchase of wharves from private parties. From 1870, when the water front passed from the control of the Legislature to the newly formed Department of Docks, the aggregate issue of dock bonds has been \$24,703,000. The rental accruing during the same period has been \$23,204,453.93.

The Department of Docks has divided the water front of the city into eleven districts, each of which is in charge of a dock-master, and the districts are so apportioned as to equalize the duties of these officers. The rent roll of the department shows the rent paid for a pier depends upon the desirability of its situation to the lessee, and bears but little relation to its cost. For example: Pier 36, of the North river, was bought in 1879, by the Department of Docks for \$203,000; a new dock was built on it at a cost of \$37,000, and it was leased for ten years to the Inman Steamship Company at \$30,000 a year, a rental

that yielded about 14 per cent. on the capital invested by the city. The lease of Pier 37 was offered at public sale in 1883, the price fixed by the commissioners being \$35,000 per annum, that amount yielding an ample interest on its cost. As a matter of fact, however, owing to the competition for its use, it brought \$70,000 per annum!

It will be seen from the following table that though the expenditures have in a number of years exceeded the revenues, yet there is a net gain for the twenty-three years during which the present plan has been in vogue:

Table showing the receipts and expenditures of the Department of Docks of New York City, from the time of its organization, May, 1870, to April 30, 1893.

FOR YEAR ENDING.	Total gross revenue from leased property and wharfage.	Total annual expenditures.
1871	\$315,524 54	\$486,449 12
1872	412,859 93	1,075,605 61
1873	447,328 01	622,878 03
1874	479,361 51	932,710 32
1875	539,361 06	1,536,204 33
1876	650,781 88	692,603 96
1877	706,607 78	433,089 90
1878	853,816 92	486,934 69
1879	762,122 37	373,425 68
1880	810,465 41	599,768 63
1881	865,071 89	640,481 57
1882	1,062,162 54	1,180,097 44
1883	1,162,893 96	953,007 85
1884	1,246,858 19	760,106 80
1885	1,187,217 14	1,020,207 51
1886	1,228,151 80	376,789 72
1887	1,260,036 58	389,169 82
1888	1,320,684 81	1,069,538 62
1889	1,418,440 62	1,218,483 76
1890	1,487,930 71	1,316,370 65
1891	1,508,554 93	1,971,844 84
1892	1,662,437 70	1,882,823 63
1893	1,765,783 65	2,762,566 00
Totals.....	\$23,204,453 93	\$22,781,158 48

The rent of the piers let by the Department of Docks yields, on an average, 15 per cent. of the purchase money, it being in some cases 10 per cent., and in others as high as 20.

The total gross revenue of the department from leased wharves and wharfage for the year ending April 30, 1893, aggregated \$1,765,783.65, which does not include the sum of \$357,122.92 collected by the Finance Department for the rent of ferries, etc., though this amount properly constitutes a portion of the revenue derived by the city for the use of its water-front.

The total expenditures during the same period were \$2,762,566. Of this amount, \$1,422,713.26 was expended for the work of construction, and \$1,079,653.12 was paid for wharf property acquired by purchase or under judgments; the sum of \$198,224.29 was spent in repairs, while the general expenses of the department amounted to \$61,975.83. While the expenditures in 1893 exceeded the receipts, it should be remembered that the bulk of these expenditures were for newly acquired property, which in time will bring an enormous revenue.

As Applied to Baltimore.

It is, of course, manifest that no such revenue could be obtained from the docks of Baltimore city, but the fact remains, that a very considerable addition could be made to the city's treasury by the adoption of the plan in force in New York. The water front of this city is limited in extent, and as the commerce of the city increases, the rental value of the wharves will be greatly enhanced. It has been contended by the city's law officers in the past, the very distant past, however, that the wharves being common property, no lease to an individual or corporation would be legal so long as its effect would be to exclude any one from using it freely.

If this contention is sound, all persons have a right to the use of the most desirable wharf in the city. This, however, is manifestly impossible, and New York has striven to solve the difficulty by letting some individual or corporation have

exclusive possession, at the same time compelling said corporation or individual to pay into the treasury of the city a sum which is sufficient to compensate those who have been deprived of the privilege. The income from the wharves could be distributed directly to the taxpayers, for as the rental of the docks go up, the rate of municipal taxation is brought down. By selling the lease of the city's docks at auction to the highest bidder, an equal opportunity would be given to all to secure the privilege. The value of the privilege that the city thus grants is in this way accurately adjusted. Each lessee, on taking possession, knows that he has the indisputable right to his pier. He is more secure in his claim to it than if he bought the pier outright from a private owner, for he gets his title direct from the city. The rent is a sum fixed in the ratio of demand by the payers of the tax. Each tenant pays no more for his franchise than its value to him, and when his lease expires, its worth to him and to the city is again ascertained in the open market. The city is thus assured of a revenue that is easily and cheaply collected and does not in the least hamper production or exchange, as would be the case were the goods brought across the piers taxed. This latter system would be extremely costly, necessitating the employment of a horde of assessors and resulting in a great deal of evasion and no end to corruption upon the part of public officials. The system in force in New York has many things to commend it and, so far as ascertained, no valid objection.

It is not gratifying to turn from this showing in New York to that of Baltimore city. The wharves in Baltimore are, for the most part, owned by private parties, who either use them themselves or rent them to others. The only wharves that are owned by the city are those at the end of streets running to the wharves, and even some of these are vested in private owners, the one at the foot of South street, for instance, having been sold by the city some years ago.

The collection of wharfage is in the hands of five Harbor Masters, one for each district. These Harbor Masters are appointed by the Mayor, and are not accountable for their acts

to anyone, though their collections are turned into the City Comptroller's office. From January 1, to December 31, 1892, the collections were as follows: First district, \$834.50; second district, \$2,680.62; third district, \$2,452.40; fourth district, \$5,165.73; fifth district, \$18,170.11; making a total of \$29,303.36. The expenses include 20 per cent. of the collections, which goes to the Harbor Masters, rent, boatmen's salaries and incidentals, and amounted in 1892 to \$7,547.29, leaving a net revenue to the city of \$21,756.07.

This sum appears ridiculous when compared to that of New York, and it could be materially increased if all the rent was collected, which, if the information given this Bureau be correct, is not now done. This is owing to the fact that there is no record of the docks from which wharfage can be collected, and a change in the Harbor Masters results in a loss of revenue to the city.

What a Comparison Shows.

For the purpose of comparison, it is of interest to publish the present tax law, and the Senate bill of 1892, which is the most recent step looking towards a change of system, and which seems to be inseparably connected with all the discussion on the subject. Everything not essential for this purpose, such as the regulations prescribed for collectors and assessors, has been omitted. It is at once evident that many of the changes are mere alterations of phraseology and are not intended to change the sense.

The first change is in the opening paragraph and is a formal one, to make this section conform to the Senate bill. In the second section, the words "District of Columbia" are inserted, as it was evidently the desire to make sure that this local subdivision would be included in the law. An important change of the present law is found in this section, as follows: "All money belonging to residents of this State, the proceeds of the sale of stock, bonds or other property disposed of for the purpose of evading and escaping taxation," &c. This provision is

aimed at those, who for the purpose of evading the tax on evidences of wealth, turn these evidences into money.

In the exemption section, "fuel" is added to those things belonging to the producer that are to be exempted. It adds to the clause exempting wearing apparel, this proviso: "except watches, diamonds, and other costly jewelry not habitually worn on the person." Under this clause, persons wearing jewelry assessed at \$100 or more would be required to pay taxes thereon. The bill would exempt "book accounts or bills receivable, or evidences of debt given for such accounts of any person engaged in commercial business who is taxed upon a fair average value of his stock of goods, wares and merchandise," &c.

No further change of the present law is proposed in the Senate bill until section 141 is reached. One of the most important proposed changes is with reference to stocks and shares in banks, corporations and joint stock companies, and is as follows: "And the said taxable value of such said stock or shares as is held by non-residents of this State, shall, for county and municipal purposes, be valued to the owners thereof in the county or city in which said bank, corporation or joint stock company is situated."

This section also adds a number of other companies to those already enumerated, and places them all on the same footing as steam railroad companies.

An almost entirely new section is proposed for the present section 146, relating to the tax upon franchises, which would materially increase the tax upon such franchises, providing the corporations holding the franchise have no irrevocable contract with the State.

The balance of the Senate bill is an entire addition to the present law and is given in full, together with the "Supplemental Act," which was designed to soften the provisions of the general law relating to stocks and bonds. The "listing feature," of which so much has been said, and which would be the chief addition to the present law, is found in this part of the bill.

THE PRESENT LAW.

1. All State and county taxes, and all taxes in the city of Baltimore, shall be levied upon the assessment heretofore made, and such further assessments as may hereafter be made agreeably to law, unless otherwise directed in the Act of Assembly levying said taxes.

Valuation and Assessment.

2. All interest, shares or proportions owned by residents of this State in all ships or other vessels registered in a port of Maryland, whether such ships or other vessels be in or out of port, are and shall be subject to valuation and assessment to the respective owners thereof, in the county or city in this State in which such owners shall respectively reside; all real property in this State belonging to any bank incorporated under the laws of this State, or of any other State, or to any national bank located in this State, or to any company or corporation incorporated by or under the laws of this State, or of any other State, or under the laws of the United States, or of any territory, or to any joint stock company doing business in this State, is and shall be subject to valuation, assessment and levy of taxes thereon for State, county and municipal purposes, by the County Commissioners of the respective counties in which such real property is situated, or by the Appeal Tax Court of Baltimore City, if such real property is located in said city, as the property of such bank, company, corporation or joint stock company; and such bank, company, corporation or joint stock company shall pay the taxes thereon so assessed and levied. All shares in any joint stock company, and all shares of stock in any bank, incorporated under the laws of this State, or in any national bank located in this State, or in any corporation incorporated under the laws of this State, other than railroad companies working their respective railroads by steam power, not exempted from taxation by irrevocable contract with this State, are and shall be subject to valuation and assessment to the owners thereof, in the county

or city in this State in which such owners may respectively reside, in the manner provided for by this code; and the taxable values of such shares shall be ascertained and finally determined, and the taxes thereon levied and collected in each year under the regulations hereinafter prescribed, or as the same may be hereafter provided by law; all shares of stock, or shares in any bank, other than a national bank, or in any company or corporation incorporated by or located in and doing business in any other State, or in any territory or country, owned by residents of this State; all bonds made or issued by any State, owned by residents of this State; all bonds made or issued by any territory or by any corporation, belonging to residents of this State; all investments in private securities of every kind and description, belonging to residents of this State; the real property located in this State, and the personal property owned by any corporation incorporated by this State, not having a capital divided into shares, or having shares of capital stock which are wholly or in part exempted from taxation by this State, when the said real or personal property so owned by said corporation is not protected from taxation by the exemption of said shares of stock from taxation; and all other property of every kind, nature and description, within this State, shall be valued to the respective owners thereof in the manner described by this code, and shall be assessed and taxed as the property of such respective owners, according to such prescribed methods of valuation, except as provided in section 4 of this article.

3. All certificates of indebtedness or evidences of debts in whatever form, made or issued by any State, territory, county, public corporation or foreign country, shall be subject to valuation and assessment to the owners thereof, in the county or city in which such owners may respectively reside.

Exemptions.

4. The provisions of sections 2 and 3 of this article shall not apply to any bonds, stock or evidence of debt issued by the United States, or to any property belonging to the United

States, or to this State, or to any county, or incorporated city or town in this State, nor to houses or buildings used exclusively for public worship, or to the furniture contained therein, or to the parsonages connected therewith, or to the grounds appurtenant to such houses, or to buildings so exclusively used for public worship, or as parsonages, which are necessary for the respective uses thereof; nor shall the provisions of such sections apply to graveyards, cemeteries or cemetery companies which do not accumulate profits for any purpose except the maintenance or improvement of such cemeteries or graveyards as cemeteries or graveyards; nor to burying grounds set apart for the use of any family, or belonging to any church or congregation, or to the crop or produce of any land in this State in the hands of the producer or his agent, or to the provisions kept for the use and consumption of the family of the person to whom the same shall belong; or to the working tools of mechanics or manufacturers, moved or worked exclusively by hand; or to wearing apparel of any description; or to fish while in the possession of the fishermen employed in catching, salting and packing the same, or while in the possession of their agents unsold; or to the buildings, equipment and furniture of hospitals, asylums, charitable or benevolent institutions, or to the ground appurtenant thereto, in any city or incorporated town in this State, which is necessary for the respective uses thereof; nor to the buildings, equipment and furniture of hospitals, asylums, charitable or benevolent institutions, in any county of this State, but not within any city or incorporated town in this State, nor to the ground, not exceeding forty acres, appurtenant respectively thereto, which is necessary for the respective uses thereof, nor to the buildings, furniture, equipment or libraries of incorporated educational or literary institutions, or to the ground appurtenant thereto, in any city or incorporated town in this State, which is necessary for the respective uses thereof; nor to the buildings, furniture, equipment or libraries of incorporated educational or literary institutions in any county of this State, but not within any city or incorporated town in this State, nor to the ground, not exceed-

ing forty acres, appurtenant respectively thereto, which is necessary for the respective uses thereof; nor to the property, real or personal, of any corporation incorporated by this State, and having a capital stock divided into shares, when said shares only are subject to taxation under the laws of this State; nor to any shares of stock in any corporation, when such shares of stock are exempted by contract with this State from taxation under the laws thereof; nor to any property of any corporation whose shares of capital stock are exempted from taxation, when said property is protected from taxation by the exemption of said shares from taxation; nor to the shares of stock of railroad companies worked by steam, incorporated by or under the laws of this State, which are subject to State taxation upon their gross receipts within this State, and to county and municipal taxation upon their respective real and personal taxable properties in the respective counties and cities of this State in which such respective properties are located; nor to the value of such proportions of the shares of homestead or building associations as may be represented by mortgages upon real or leasehold property within this State, when such real or leasehold estate so mortgaged is subject to taxation under the laws of this State; nor to such mortgages when the real or leasehold estate so mortgaged is subject to taxation under the laws of this State; nor to mortgages upon property wholly within this State; nor to the mortgage debts secured thereby; but each and every one of said exemptions from taxation shall be strictly construed.

5. No person who is not assessed to the sum of at least one hundred dollars shall be required to pay any tax.

Mode of Valuation and Assessment.

6. Every assessor appointed by the Mayor and City Council of Baltimore, and every collector of State and county taxes in this State, shall annually inform himself, by all lawful means, of all property, stocks or investments in his county, district or city, liable to taxation, and which may have been omitted in the assessment, and all buildings and improvements, and all

property created or acquired since said assessment, and shall value the same at the full cash value thereof, and shall make return thereof to the County Commissioners, or Appeal Tax Court, if in the city of Baltimore; and for the purposes of this section, the said collectors and assessors are hereby clothed with the powers of general assessors, and their valuation shall be subject to revision and correction by the County Commissioners and Appeal Tax Court.

7. The collectors and assessors shall be allowed such compensation for the performance of their duties as assessors as the County Commissioners or Judges of the Appeal Tax Court of Baltimore City may allow.

8. Each of the clerks of the Circuit Courts for the counties shall, annually, between the first of January and the first of March, transmit to the County Commissioners of his county, a list of all the alienations of property, chancery sales made by trustees and finally ratified, and of all judgments and decrees recorded in his said office or rendered in his court since he last furnished a list of the same, which list shall show the property alienated, and the amount due on the judgments or decrees, so as to enable the County Commissioners to assess the parties to whom the property is conveyed or money due; and the clerks of the several courts in the city of Baltimore shall annually, within the same period, furnish the Appeal Tax Court with a similar list for the like purpose; and the clerks shall be allowed ten cents for each alienation, judgment or decree, to be paid by the county or city to which the list may be furnished. In all cases of the renewals of judgments by *scire facias*, the said clerks shall return the date of the first and also of the original judgment, and the same judgment shall not be taxed twice at the same time by the County Commissioners or Appeal Tax Court.

9. The several Registers of Wills in this State shall annually, on or before the first day of March, return to the County Commissioners or Appeal Tax Court, a summary account of all property that shall appear by the records of the several

Orphans' Courts to be in the hands of each executor, administrator or guardian as such; and all such property, if not before assessed, shall then be assessed; and every executor, administrator or guardian shall be liable to pay the taxes levied thereon, and shall be allowed therefor, by the Orphans' Court, in his accounts; and the said Register, for the duties imposed by this section, shall be allowed such compensation as the County Commissioners or Appeal Tax Court may deem proper. Any clerk or register failing to perform the duties imposed by this and the preceding section shall be guilty of a misdemeanor, and shall be liable to indictment, and on conviction shall be fined not exceeding one hundred dollars.

10. In all cases where discoveries of assessable property are made by the collectors, County Commissioners or Appeal Tax Court of Baltimore city, either from the returns of clerks, registers, or assessors, or in any other way, the said County Commissioners or Appeal Tax Court shall assess the same and add the same to the amount on which taxes are to be levied.

12. No person shall be chargeable with the assessment of property which he may have aliened, but the same shall be chargeable to the alienee; and the County Commissioners and Appeal Tax Court shall, from time to time, correct the account of any person who may have parted with the possession of any property, and the same so taken off shall be charged to the person who may have acquired possession of the property, unless the same shall have been removed from the county or city.

13. The County Commissioners and Appeal Tax Court, at their annual meeting for noting transfers and hearing appeals, are directed to alter and correct the account of any person who may have disposed of or acquired any property since the last assessment, or whose property or any part thereof may have been omitted, if the report of such disposition, acquisition or omission, be supplied by satisfactory evidence; and if real estate or other property shall from any cause have increased largely in value since the last assessment, the County

Commissioners or Appeal Tax Court shall correct and alter the assessment of the same, so as to conform to its present value.

Appeal Tax Court.

14. The Mayor and City Council of Baltimore shall annually appoint a board, to consist of at least three persons, to be styled the Appeal Tax Court, who shall meet from time to time for the purpose of hearing appeals and making transfers and correcting the accounts of assessable property charged to taxpayers, and the assessment thereof; the said Mayor and City Council may also appoint such number of assessors as they may deem necessary in investigating and ascertaining all omitted property, and assessing and returning the same to the Appeal Tax Court.

Assessments—Abatements and Additions.

17. Whenever any person shall make application for an allowance or deduction on account of the sale, transfer, alienation, loss or removal of any property, or the collection or payment of any public or private security for money, the County Commissioners or Appeal Tax Court shall interrogate him on oath in reference thereto, and the disposal of the same, and especially inquire of him to whom the same has been sold or transferred, and the amount of the purchase money or the money collected, and how the same has been invested.

18. They shall also interrogate said person on oath in reference to any acquisitions or investments made by him, and not already assessed, and the amount of all such acquisitions and investments shall be added to his assessable property, and if he refuses to answer, no allowance or deduction shall be made on his assessment; they shall also have power to summon before them any person who they may know or be credibly informed has acquired new property, or whose account of taxable property may in their judgment require revision and correction, and examine such person on oath touching the same; and any person so summoned, and refusing to appear, or to be sworn, or

to answer touching said account or property, shall be liable to prosecution therefor, and upon conviction before a Justice of the Peace, shall be fined not exceeding fifty dollars for each offence.

Assessment--Removals of Property.

19. Every person who shall remove to any county or city from the county or city in which his property has been assessed, or from any other place without the State, and whose personal property has not been assessed for the county or city to which he has removed, or any other person whose property or some part thereof has not been assessed, shall, when required by the collector of the county in which his personal property or the personal property under his care or management doth lie, or by the Appeal Tax Court for the City of Baltimore, give to such collector or Appeal Tax Court a full and particular account of his personal property in said county or city, and of all the personal property in his possession or under his care and management, liable to be assessed, and which, before that time, shall not have been assessed in the said county or city, and the name of the person to whom it belongs.

20. If any person shall, when required by a collector or by the Appeal Tax Court, or after ten days' notice, neglect to render the account required in the last preceding section, he shall forfeit a sum not exceeding one thousand dollars; and the collector or Appeal Tax Court shall, on his or their own knowledge, and on the best information he or they can obtain, value the property of such person to the utmost sum he or they believe the same to be worth in cash; and in his or their return of said valuation, he or they shall certify the said refusal or neglect, and the County Commissioners or Appeal Tax Court shall assess such person according to the sum so returned, and the same shall be collected as the assessment.

21. Whenever any person shall apply to the County Commissioners or Appeal Tax Court for allowance or deduction on account of the removal of property from one county to another, the County Commissioners or said court to whom the

application shall be made, shall ascertain of the party applying, to what place within the State the property has been removed, and shall inform the proper authorities of the place to which the property is removed, of the fact of such removal.

Rate and Items of State Tax.

22. The County Commissioners of the several counties of this State, and the Mayor and City Council of Baltimore city, are directed to levy the State taxes, to be collected according to law, and to be apportioned as follows: A tax of five and one-half cents on each one hundred dollars, to meet the interest and create a sinking fund for the redemption of the defence redemption loan; a tax of one-fourth of one cent on each one hundred dollars, to meet the interest and to create a sinking fund for the redemption of the exchange loan of 1886; a tax of one and one-half cents on each one hundred dollars, to meet the interest and create a sinking fund for the redemption of the treasury relief loan; and a tax of ten and one-half cents on each one hundred dollars to aid in support of the public schools, to be distributed according to law among the several counties and the city of Baltimore; making an aggregate of seventeen cents and three-fourths of a cent on each one hundred dollars; and the Comptroller of the Treasury shall levy the same State taxes on the shares of capital stock of all banks, State and national, and other incorporated institutions and companies of this State, the shares of whose capital stock are liable by law to assessment and taxation.

Record of Property Assessed.

23. The County Commissioners and Appeal Tax Court shall direct their clerk to enter and record in a book or books to be provided for the purpose, an accurate and fair account of all property of every sort within their county or city, and the valuation thereof, and an alphabetical list of the owners thereof, properly arranged according to the election districts and the several wards in the city of Baltimore, which any person may inspect without fee or reward.

24. The said clerks shall transmit to the Comptroller, annually, within thirty days after the annual levy of taxes for the State, a return of the assessments of property in each county and the city of Baltimore, showing the amount thereof, and the amount placed in the hands of each collector of such county or city; and for neglecting or refusing to perform this duty, the clerk so neglecting or refusing shall be subject to presentment, and upon conviction thereof in the Circuit Court for the county or the Criminal Court of Baltimore, to a penalty of one hundred dollars for the use of the State.

25. The State's Attorney of the county or city shall give information of such neglect or refusal, to the grand jury of the county or city, upon being advised thereof by the Comptroller.

Levy of Taxes.

26. It shall be the duty of the County Commissioners of the several counties, and Mayor and City Council of Baltimore, annually, on or before the third Tuesday of April, to impose the State taxes prescribed by law; and if the County Commissioners of any county, or the Mayor and City Council of Baltimore, shall fail to impose the said taxes before the first day of July in any year, the clerk of the said County Commissioners or Register of the city of Baltimore, as the case may be, shall give notice thereof to the Governor, within twenty days after such failure, and, thereupon, the Governor shall appoint a tax board of three persons, in the county or city so failing, a majority of whom shall have power to act, and whose duty it shall be forthwith to levy said taxes and place the same in the hands of the collectors of the tax for such county or city.

29. The members of said board shall each receive the sum of three dollars for each day they may be engaged in the discharge of their duties, not exceeding twenty days, to be levied by them on the county or city for which they were appointed, and collected for their use by the Collector of State Taxes thereof.

46. All persons and incorporated institutions that shall pay their State taxes on or before the first day of September of the

year for which they were levied, shall be entitled to a deduction of five per centum on the amount of said taxes; all that shall pay the same on or before the first day of October, of the said year, shall be entitled to a deduction of four per centum; and all that shall pay the same on or before the first day of November, of the said year, shall be entitled to a deduction of three per centum; and at the time of receiving said taxes, the proper officers shall make the deductions aforesaid, and note the same upon the receipts given to the persons or incorporated institutions so paying; but nothing contained in this section shall extend to the taxes payable on the public debt of Maryland or the stock loans of the city of Baltimore.

47. All State and county or municipal taxes shall be liens on the real estate of the party indebted from the time the same are levied.

51. The real estate of a delinquent taxpayer may be sold to pay State, county or city taxes, whether there be personal property or not. * * * This section shall not apply to Garrett county.

60. Whenever personal property that has been assessed as the property of any individual, in any county, city or election district, shall be removed before the tax levied thereon has been collected, the collector in whose hands the levy is, may pursue said property and collect said tax in the same manner as if the property remained in his said county, city or district.

64. Whenever a sale of either real or personal property upon which taxes are due and payable shall be made by any ministerial officer, under judicial process or otherwise, all sums due and in arrears for taxes, from such property, from the party whose property is sold, shall be first paid and satisfied; and the officer or person selling shall pay the same to the collector of the county or city, if any, or to the treasurer if there be no collector.

Payment by Administrators and Executors.

65. Administrators shall pay all taxes due from their decedents as preferred debts, and to the exclusion of all others,

except the necessary funeral expenses; and on failure, their bonds shall be put in suit for the use of the State, and recovery had for the whole amount of taxes due, and interest from the time they were payable; this section shall also apply to guardians, for taxes upon property in their hands as such.

Payment by Tenants.

66. The tenant or person holding any leasehold estate shall pay to the collector the taxes levied upon the demised premises, and shall have his action against the landlord for the sum so paid; or may deduct the same out of the rent reserved; unless otherwise agreed between the lessor and lessee.

Taxes, When Due.

67. Taxes shall be considered in arrear on the first day of January next succeeding the date of their levy, and shall bear interest from that date, at the rate of six per centum per annum. This section shall not apply to Garrett county.

Completion of Collections by Collector.

82. Every collector shall be allowed the term of one year after the expiration of the time for which he was appointed, to collect all balances due him, in the same manner as he could collect the same before the expiration of his term of office. This section shall not apply to Garrett county.

Limitations.

83. All taxes levied for county or city purposes shall be collected by the collectors of the counties or cities, respectively, within four years after the same shall have been levied; and if the same shall not be collected within four years, the parties from whom such taxes may be demanded, may plead this section in bar of any recovery of the same.

Payment of Taxes by Corporations.

84. The president or other proper officer of the banks, State and national, and other incorporated institutions and companies, chartered by this State, or located and doing business

therein, shall annually, on the second day of January, pay to the treasurer of the State, the State tax imposed upon the shares of capital stock of said banks, institutions or companies, for the previous year, whether they or any of them have or have not declared any dividend or earned any profits, and without regard to the place of residence of stockholders.

85. In all cases where any incorporated institution or company has no capital stock, so called, the property and assets of said company, of whatever nature, shall be assessed, and the president, or other proper officer thereof, shall pay to the treasurer the tax due upon said property and assets, at the time aforesaid, and also to the collector, of the county or city, the amount of all taxes due on said property and assets, to said county or city.

86. Every savings bank, institution or corporation, organized for receiving deposits of money and paying interest thereon, shall pay annually a franchise tax to the amount of one-fourth of one per centum, on the total amount of deposits held by such savings bank, institution or corporation; and it shall be the duty of the president, treasurer or other proper officer of every such savings bank, institution or corporation, on or before the first day of May, in each year, to report, under oath, to the State Tax Commissioner, the total amount of deposits held by such savings bank, institution or corporation, on the preceding first day of January; the State Tax Commissioner shall, on or before the first day of June following, calculate the amount of franchise tax to be paid by the said savings bank, institution or corporation, at the rate hereinbefore mentioned, and shall apportion one-fourth of the same, to be paid to the Treasurer of Maryland, for the State tax, and the other three-fourths of the same to the county in which such savings bank, institution or corporation is situate, or to the city of Baltimore, if such savings bank, institution or corporation be situate in said city, and shall certify the said amount due to the State, to the Comptroller of the Treasury, to be collected as other State taxes, and the amount due to the counties in which such savings banks, institutions or corpora-

tions are severally situate, to the County Commissioners for such counties respectively, and the amount due to the city of Baltimore, to the Appeal Tax Court of such city, to be collected as other county and city taxes due from corporations are collected; and such franchise taxes, as so apportioned, shall be due and payable respectively, as other State, county and city taxes are due and payable by law, and, if unpaid shall be in arrear, and shall bear interest as other said taxes; and no other tax shall be laid on such bank, institution or corporation, in respect to such deposits, but the real property of any such savings bank, institution or corporation, shall be liable to assessment and taxation as other real property belonging to other corporations in this State; any president, treasurer or other proper officer whose duty it is, by the terms of this section, to make the report herein required, who shall make a false report with intent to avoid taxation, or who shall fail, neglect or refuse to make such report, shall be subject to indictment therefor, and, if convicted, shall be fined not less than fifty dollars nor more than five hundred dollars, in the discretion of the court having jurisdiction in such case.

86 A. Nothing in section eighty-six, of this article, relating to savings banks, or savings institutions or corporations, shall be construed as granting exemption from taxation to the shares of any bank or other corporation, or to any other property taxable under the laws of this State, by reason of or on account of its ownership, by a savings bank, institution or corporation of this State.

87. The president or other proper officer of any incorporated institution or company of this State which shall have issued any bonds, certificates or evidences of debt, bearing interest, shall, on or before the first day of July in every year, make return to the Comptroller, of the aggregate amount of said bonds, certificates or other evidences of debt held by or belonging to the residents of this State, and pay to the treasurer on said day, out of the interest due to the holders thereof, the State tax thereon; and shall also furnish the County Com-

missioners or Appeal Tax Court of the county or city, annually, on or before the first day of March, a list of the holders of said bonds, certificates or evidences of debt, residing in said county or city, when such residence is known, and when the residence of the holder is unknown, to the County Commissioners of the county where such corporation is situate, or to the Appeal Tax Court, if situate in Baltimore city; if any such officer shall fail to perform the duty imposed by this section, he shall, upon indictment and conviction thereof in the court having criminal jurisdiction, be fined not less than five hundred dollars, and imprisoned not less than one month, and until this fine is paid; all bonds, certificates or evidences of debt issued by any such incorporated institution or company in the State, shall be presumed to be held and to belong to residents of this State; but if the holder of any such bonds, certificates or evidences of debt shall certify upon oath, duly administered according to law, to the said president or other proper officer, that said holder is the *bona fide* owner of such bonds, certificates or evidences of debt, and that he is a *bona fide* resident of any other State or county, then such president or other proper officer shall report the fact of such holding by such non-resident or non residents, and shall deduct from the amount of bonds, certificates or other evidences of debt to be taxed, all such bonds, certificates or evidences of debt, so owned by non-residents of this State as aforesaid, and shall not be liable for the taxes on the same.

88. All bonds and certificates of debt bearing interest, issued by any railroad corporation or other corporation of this State, secured by mortgage of property wholly within this State, shall be subject to assessment and taxation to the owner or owners thereof, in the same manner as like bonds or certificates of debt, bearing interest and secured by mortgage of property partly in this State and partly in some other State or States, are now subject under the laws of this State; and it shall be the duty of the County Commissioners of the several counties, and the Appeal Tax Court of Baltimore city, to assess all such bonds or certificates of debt to the owner or owners thereof,

resident in their several counties, or in the city of Baltimore, respectively.

88 A. If any corporation of this State from which State taxes shall be due and payable on the assessed value of its shares of capital stock, shall fail or neglect to pay the same to the treasurer of the State before the first day of November of the year for which such taxes have been assessed and levied; such corporation shall for such failure and neglect forfeit and pay to the State of Maryland an additional amount of five per centum as penalty or damages to be added to the said State taxes so due and unpaid, and it shall be the duty of the Comptroller to add the said penalty or damages to the said account, and forthwith to make out said account and certify the same under the seal of his office, and to cause suit to be brought for such State taxes and such penalty or damages in the Circuit Court for the county in which the principal office of said corporation is located, or in the Superior Court of Baltimore City, or the Court of Common Pleas of the City of Baltimore, if the principal office of such corporation be located in said city, and the said suit shall stand for trial at the first term after service of the writ shall have been made on such corporations; and service of the writ aforesaid on any officer of such corporation shall be deemed and taken as a sufficient service on such corporation.

88 A A. Every corporation incorporated since January first, eighteen hundred and ninety, under any general or special law of this State, except cemetery companies, incorporated for religious or purely charitable and benevolent, and railroad companies shall pay to the State Treasurer, for the use of this State, a bonus of one-eighth of one per centum upon the amount of capital stock which said company is authorized to have, in two equal instalments, and a like bonus upon any subsequent increase thereof; the first instalment shall be due and payable upon the incorporation of said company, or the increase of the capital thereof, and the second instalment one year thereafter; and no company as aforesaid shall have or exercise any corporate powers until the first instalment of said

bonus has been paid to the State Treasurer; whenever the capital stock of any of said companies, or any company of the like character heretofore incorporated shall be increased, a bonus of one-sixth of one per centum upon the amount of said increase, shall be paid to the State Treasurer in two equal instalments, the first to be due and payable upon the recording of the certificate of such increase, or upon the passage of any special act authorizing such increase, and the second instalment shall be due and payable one year thereafter.

§ 88 B. If upon the return of the writ issued against such corporation, and the said corporation being duly summoned as aforesaid, such corporation shall fail to appear by attorney or agent upon the first call of the docket, it shall be the duty of the court to cause the personal appearance of the said corporation to be entered, and the cause shall stand for trial or hearing, and judgment shall be rendered as if said corporation had appeared by attorney, and if such corporation shall appear by attorney or agent and either party shall desire a trial by jury, it shall be the duty of the court to cause the issues to be framed and a jury to be empaneled for the trial thereof, and if the verdict of the jury shall be for the State, judgment shall be entered without stay for the amount of the State taxes so due as aforesaid, and the five per cent. additional as damages, with interest and costs, and a fee of ten dollars shall be allowed the attorney for the State, to be taxed in the plaintiff's costs in said suit, and execution shall be issued on such judgment if the same be not paid into the treasury within twenty days after the rendition thereof.

§ 88 c. The certificate of the Comptroller, under seal, of the amount of such State taxes so due as aforesaid, and of such penalty or damages, shall be *prima facie* evidence to entitle the State to judgment for said penalty or damages in every case in which such State taxes shall be so in arrear and unpaid, and for which such suit shall be so brought as aforesaid.

§ 88 D. The Comptroller of the Treasury may select any attorney in whom he may have confidence, to bring such suit

and conduct the same to judgment and execution; but such attorney shall have no power to receive or receipt for the money so due the State, and no acquittance shall be good to discharge any such corporation from such taxes, but the receipt of the State Treasurer for such amount so due as aforesaid, or the proper officer to whom execution may be issued on such judgment as aforesaid; if any such attorney or person other than the State Treasurer or the proper officer to whom execution may issue on such judgment, shall presume in any such case to receive and give receipt for such amount so due the State, such attorney or other person shall be guilty of a misdemeanor, and shall upon conviction, be fined double the amount so received and receipted for, and shall stand committed until such fine and the costs thereon are fully paid.

88 E. If after suit brought and judgment rendered as aforesaid, any such corporation shall still continue in arrear and shall fail or neglect to pay its State taxes so due as aforesaid, for the space of two years after the same shall be in arrears, such failure and neglect shall be deemed to amount to and shall constitute a forfeiture of the charter of such corporation, and such charter shall be decreed to be so forfeited and annulled *ipso facto*.

Payment of State Taxes on Baltimore City Stock.

89. The Register of the city of Baltimore shall, within one month after the first day of April, annually, make out and deliver to the Appeal Tax Court, for the city of Baltimore, a full and accurate list of the holders of the stock loans of said city, on the first day of April, in the year for which said list is made, showing the several amounts held by the said stockholders, respectively.

90. The said Appeal Tax Court shall in each year carefully examine the said list, and correct the same by striking therefrom all the holders of said stock who may be exempt from taxation on said stock; and shall, on or before the first day of June, annually, deliver one copy of the said list, as corrected

by them, to the said Register, and one copy thereof to the Comptroller, setting forth distinctly in said copies the assessed value of the stock mentioned therein.

91. The Register of the city of Baltimore shall, on the first day of July, in each year, set apart and pay over to the Treasurer of the State, out of the funds in his hands, for payment of the interest becoming annually due and payable, the State tax imposed by this article, on all that part of such stock loan included in the said corrected list returned to him by the Appeal Tax Court, and shall deduct from the interest due and payable thereon, to each holder of said stock, his proportion of the amount so retained and paid to the Treasurer.

92. If the said Register shall at any time fail to make out and deliver to the Appeal Tax Court the list of holders of the said stock loan, as herein required, it shall be the duty of the Appeal Tax Court to ascertain, in such manner as they may deem most accurate, the amount of said stock loans of the city of Baltimore, outstanding on the first day of April, in the year in which such failure or refusal shall take place, and on or before the first day of June in said year, make and deliver one copy of a statement, certified by them, showing the amount of said stock so ascertained by them, and its assessed value, to the said Register, and one copy thereof to the Comptroller of the State; and the Register shall thereupon set apart and pay the tax aforesaid, and deduct the same from the interest as aforesaid; but the said Register shall not be required to set apart and pay over the said tax on any part of said stock loans, which he may satisfy the Comptroller, by a certificate to that effect, signed by the Appeal Tax Court, or by other satisfactory evidence, was held on the first day of April, in the year for which the tax may become due, by any person entitled under the laws of this State to hold the same free from taxation.

State Tax on Public Debt of the State.

94. The Treasurer is hereby directed to levy the State taxes on all the public debt of the State of Maryland liable to taxation, and owned or held by any person, resident or non-

resident, of this State, assessed at the following valuation: so much of the said debt that bears an interest of six per centum shall be assessed at par; so much thereof as bears an interest of five per centum shall be assessed at \$85 in the hundred; so much thereof as bears an interest of four and a half per centum at \$80 in the hundred; and so much thereof as bears an interest on three per centum at \$64 in the hundred; which assessment shall be made by the Treasurer at the time prescribed in the next succeeding section for the payment of said taxes.

95. The said tax shall be collected by the Treasurer by retaining it out of the interest falling due on the first day of July in each year, on the said portion of the public debt.

Assessment for State Taxes of Stocks of Public and Private Corporations.

96. The public debt of this State, stock loans of the city of Baltimore, the capital stock and bonds, certificates or other evidences of debt, bearing interest, issued by incorporated companies or institutions of this State, shall be excluded from the assessment in the several counties and city of Baltimore, so far as relates to the State tax, the payment of said tax thereon being hereinbefore provided for.

Tax on Commissions of Executors and Administrators.

97. All commissions allowed to executors or administrators by the Orphans' Courts of this State, shall be subject to a tax, for the benefit of the State, of one-tenth part of the sum so allowed; and when a legacy is left to an executor by way of compensation, such legacy shall be reckoned in the commissions fixed by the Court.

Collateral Inheritance Tax.

102. All estates, real, personal and mixed, money, public and private securities for money of every kind passing from any person who may die seized and possessed thereof, being in this State, or any part of such estate or estates, money or secu-

rities, or interest therein, transferred by deed, will, grant, bargain, gift or sale, made or intended to take effect in possession after the death of the grantor, bargainer, devisor or donor, to any person or persons, bodies politic or corporate, in trust or otherwise, other than to or for the use of the father, mother, husband, wife, children and lineal descendants of the grantor, bargainor, testator, donor or intestate, shall be subject to a tax of two and a-half per centum on every hundred dollars of the clear value of such estates, money or securities; and all executors and administrators shall be discharged from liability for the amount of such tax, the payment of which they may be charged with, by paying the same for the use of this State, as hereinafter directed; provided that no estate which may be valued at a less sum than five hundred dollars, shall be subject to the tax imposed by this section.

103. Every executor or administrator, to whom administration may be granted, before he pays any legacy, or distributes the shares of any estate liable to the tax imposed by the preceding section, shall pay to the Register of Wills of the proper county or city, two and a-half per centum of every hundred dollars he may hold for distribution among the distributees or legatees, and at the rate of any less sum, for the use of the State; this section shall not be construed so as to release any tax already fixed on any collateral inheritance, distributive share or legacy.

104. When any species of property other than money or real estate shall be subject to said tax, the tax shall be paid on the appraised value thereof as filed in the office of the Register of Wills of the proper county or city; and every executor shall have power, under the order of the Orphans' Court, to sell, if necessary, so much of said property as will enable him to pay said tax.

Tax on Official Commissions.

127. When their commissions are delivered to them, the following officers shall respectively pay to the clerk from whom they receive the same, the sums following, to wit: The Judges

of each of the Circuit Courts for the several counties, fifty dollars; the Judge of the Superior Court, of the Court of Common Pleas, of the Circuit Court, of the Baltimore City Court, and of the Criminal Court of the city of Baltimore, each fifty dollars; the Judges of the Court of Appeals, each fifty dollars; the Sheriff of Baltimore city, three hundred dollars; the Sheriff of Baltimore county, Frederick county and Washington county, each one hundred dollars; the Sheriff of Allegany county, seventy-five dollars; the Sheriff of Carroll county, Harford county, Dorchester county, Anne Arundel county, Worcester county, Somerset county, Cecil county and Prince George's county, each forty dollars; the Sheriff of Howard county, thirty dollars; the Sheriff of Caroline county, Montgomery county, Talbot county, Charles county, Queen Anne's county, Calvert county, Garrett county, Kent county, Wicomico county and St. Mary's county, each twenty dollars; each Judge of the Orphans' Court of Baltimore city, fifty dollars; each Judge of the Orphans' Court in the several counties, ten dollars; each Justice of the Peace and Constable in the State, two dollars; the Tobacco Inspectors, each fifty dollars; the weigher of live stock, fifty dollars; the weighers of Grain, Hay and Straw, each ten dollars; each Notary Public in the city of Baltimore, the sum of twenty dollars; the Clerk of the Circuit Court of Baltimore city, the Clerk of the Court of Common Pleas, the Clerk of the City Court, and the Clerk of the Criminal Court of Baltimore city, each two hundred dollars; the Register of Wills of the city of Baltimore, two hundred dollars; the Register of Wills for Baltimore county, one hundred and fifty dollars; the Register of Wills of Frederick county, one hundred dollars; the Register of Wills of Washington county, seventy-five dollars; the Register of Wills of Allegany county, Carroll county, Harford county, Kent county, Dorchester county, Anne Arundel county, Worcester county, Somerset county, Cecil county and Prince George's county, each fifty dollars; the Register of Wills of Howard county, Caroline county, Montgomery county, Talbot county, Charles county, Queen Anne's county, Calvert county,

Garrett county, Wicomico county and St. Mary's county, each thirty dollars.

129. The Clerk of the Court of Appeals and the Clerk of the Superior Court of Baltimore city shall pay to the Treasurer, two hundred dollars each; and the clerks of the Circuit Courts of the several counties shall each pay the sum of one hundred dollars when they respectively take the oath of office.

Assessment of Corporate Stock owned by Non-Residents.

131. For the purpose of valuing the stock of banking and other private corporations held by non-resident stockholders, it is hereby declared and understood that the stock of banking, insurance or other corporations, usually termed moneyed institutions, is situate at the place at which the principal office for the transacting of the business of such corporation is situate; the stock of a turnpike, railroad, steamboat, canal or other improvement corporation is situate at the place where its principal office for the transaction of business shall be established, if the said office be within the limits of this State, and shall be so assessed, and if not, then the assessable property of such corporation shall be valued and assessed in the county or counties in which said property is situate, and in the city of Baltimore so far as it is situate in said city; and the stock of mining, manufacturing and other like corporations, situate at the place where the works of such corporation, or the greater part of their operations, respectively, shall be conducted, shall be assessed in like manner in the county or city where such works are situate.

State Tax Commissioner.

132. There shall be in the Treasury department, a tax commissioner of the State, to be appointed by the Governor, Comptroller and Treasurer, or a majority of them, who shall take the oath prescribed by the constitution, and shall hold his office for four years from the date of his qualification, and until the appointment and qualification of his successor, and shall receive a salary of twenty-five hundred dollars per

annum, and such necessary traveling expenses, (not exceeding eight hundred dollars in any one year,) as may be audited by the Comptroller, who shall issue his warrant for the payment of the same when allowed. The State Tax Commissioner shall, on or before the fifteenth day of May, in each year, assess for State purposes the shares of capital stock in all banks, State or national, banking associations or other incorporated institutions or companies incorporated under the authority of this State, or located and doing business therein, whose shares of capital stock are liable to assessment and taxation by the laws of this State; he is authorized and empowered to examine upon oath any officer of the same, touching the affairs thereof, or to examine upon oath any other person as a witness who he may be advised has important information in regard to the value of such shares of capital stock; and any such officer refusing to answer upon oath, touching the affairs of such bank, banking association or company, of which he is an officer, shall, on indictment and conviction thereof, be fined not less than five hundred dollars; he shall report the assessment of such shares of capital stock to the Comptroller, and said assessment shall be subject to appeal and revision, as hereafter provided in section 144 of this article; he shall report the amount of the basis of assessment for State purposes in the several counties and city of Baltimore, with his suggestion in regard to the same, to the General Assembly at each regular session thereof, and shall perform such other duties as may be prescribed by law.

133. The president, cashier or other chief officer of any bank or banking association, State or national, located and doing business in this State, shall, by the fifteenth day of April in each year, report to the State Tax Commissioner a true and correct statement of the number of shares of capital stock in such bank or banking association, of which he is president, cashier or chief officer, and the par value of each share, with such information in regard to the value of the same as may be required by the said commissioner, and may be in the possession of such officer; and the commissioner shall annually, by

the fifteenth day of May in each year, assess the said shares as hereinafter provided, and levy the State taxes prescribed by law upon the same; and it shall be the duty of the said president, cashier or other chief officer, on or before the first day of January next succeeding, to pay to the Treasurer of the State the State tax on such shares of the capital stock of such bank or banking association, of which he is president, cashier or other chief officer, as aforesaid.

133 A. The president, cashier or other chief officer of each security, safe deposit, fidelity, guaranty and trust company, heretofore or hereafter incorporated under the laws of this State, or incorporated under the laws of any other State and located in and doing business in this State, shall, by the fifteenth day of April in each year, make a full and detailed report under oath to the State Tax Commissioner, of all securities and investments of every description held by such companies, respectively, in trust or otherwise, for any person, corporation or trust estate, to the end that the said investments may be made subject to State, county and municipal taxation, properly applicable to the same, provided by law; and the said Tax Commissioner shall annually, by the fifteenth day of May in each year, assess said securities or other investments according to their fair value, and levy the State taxes prescribed by law upon the same; and shall also, immediately upon the receipt of said annual reports, transmit a copy of the same to the County Commissioners of the several counties in which the principal office of said companies shall be located, and to the Appeal Tax Court of Baltimore city, for the due assessment and levy of county and municipal taxes upon such investments and other securities.

134. On the failure, refusal or neglect of any president, cashier or other chief officer of any such bank or banking association to furnish to the State Tax Commissioner, by the fifteenth day of April in each year, the statement required to be furnished by the preceding section, such president, cashier or other chief officer of said bank or banking association shall forfeit and pay to the State the sum of five hundred dollars,

to be recovered in the name of the State in the Circuit Court for the county where the said bank or banking institution is located, or the Superior Court of Baltimore city, if the same be located in that city, with costs of suit; and a fee of fifty dollars shall be taxed as part of the plaintiff's costs, which the attorney shall be entitled to receive for prosecuting said action to a recovery; and it shall be the duty of the Comptroller to cause suit to be brought to recover said penalty.

135. On the failure, refusal or neglect of any such bank or banking association to pay said tax on the shares of its capital stock, as provided by the two preceding sections, by the first day of January succeeding said levy, the Comptroller shall cause suit to be brought in the name of the State against the said bank or banking association for the said taxes in the Circuit Court for the county, or the Superior Court of Baltimore city (as the case may be); and the said suit shall stand for trial at the first term, and judgment shall be rendered on motion unless issue be made, and a trial by jury be desired by either party, in which case a jury shall forthwith be empanelled to try the same; and the certificate of the Comptroller of the amount of said taxes, and that the same remain due and unpaid shall be *prima facie* evidence to entitle the State to a verdict and judgment against said bank or banking association; and in all cases where the said court shall find for the State, the judgment shall be rendered against the said bank or banking association for the amount of said taxes, and ten per cent. additional as damages, and all costs, and a fee of fifty dollars, shall be allowed the attorney in every such case, to be taxed as a part of the plaintiff's costs in such suit.

136. It shall be the duty of the president of any corporation organized under article 23, title "Corporations," for the transaction of any business for profit or gain, before proceeding to transact any business, or to open any office for the purpose of transacting such business, to file in the office of the State Tax Commissioner, a copy of the certificate of incorporation under which it is organized, certified by the clerk of the Circuit Court for the county in which such certificate is

recorded, or by the clerk of the Superior Court of Baltimore City, if recorded in said city; and such president is hereby required to file the same in said office; and any such president neglecting or refusing to comply with the provisions of this section shall be fined fifty dollars for such neglect or refusal, to be recovered as other fines are recovered under this code.

137. The County Commissioners and Appeal Tax Court are directed annually to correct the assessment of the property in their respective counties and the city of Baltimore, and to alter and correct the valuation of any property which may have been improperly valued, and to assess the same at its true value, and to alter and correct the account of any person whose property or any part thereof may have been omitted in the former assessment, or may have been since acquired; and if real estate or other property shall, from any cause, have increased or diminished largely and materially in value since the last levy, they shall correct, alter and amend the assessment of the same as aforesaid, so as to conform to its present value; they shall also, at any time, when so directed by the State Tax Commissioner, with the concurrence of the Attorney-General, (signified by his opinion in writing,) correct the assessment of the property in the respective counties and in the city of Baltimore, by striking therefrom any property which they shall be instructed by the said Tax Commissioner and Attorney-General, is not subject to taxation under the laws of this State, or of the United States.

138. The president or other proper officer of the banks, State and national, and other incorporated institutions in the several counties and the city of Baltimore, shall annually, on or before the first day of March, furnish to the County Commissioners of each county or the Appeal Tax Court of Baltimore city, in which any of its stockholders may reside, a list of such stockholders, so far as their place of residence may be known to such officer, together with the number of shares of stock held by each. In case the president or other proper officer of said bank or other corporation, fail or refuse to furnish the statement herein required, to the Appeal Tax

Court or the County Commissioners aforesaid, on or before the day hereinbefore specified for that purpose, then for each day that shall thereafter elapse until the said statement shall be furnished, the said bank or other corporation shall pay to the Mayor and City Council of Baltimore, or the County Commissioners, as the case may be, the sum of one hundred dollars, and for the valuation and the effectual collection of the taxes assessed on the stock of banks or other incorporated institutions, held by non-residents, the president or other proper officer of the corporation shall annually, on or before the first day of March, make out and deliver to the County Commissioners of the county, or Appeal Tax Court, where said corporation is situate, an account of the number of shares of stock in such corporation held by persons not residents of this State, and the same shall be valued at its actual cash value, to and in the name of such stockholders, respectively; but the tax assessed on such stock shall be levied and collected from such corporation, and may be charged to the account of such non-resident stockholders in the said corporation, and shall be a lien on the stocks therein held by such stockholders, respectively, until paid; and in no case shall the stock of any corporation, in the aggregate, be valued at less than the full value of the real estate and chattels, real and personal, held by or belonging to such corporation in the several counties and city of Baltimore, whether the shares of such stock are quoted on the market or not. In case of failure or refusal to comply with this requirement, the said bank or other incorporated institution shall be liable to the penalty hereinbefore prescribed; and the president and cashier, or treasurer of any such bank or other incorporated institution, failing to comply in every respect with the provisions of this section, shall be liable to indictment therefor, and on conviction, shall be fined not less than five hundred dollars, nor more than five thousand dollars, in the discretion of the court, and shall stand committed until such fine is paid.

139. The County Commissioners or Appeal Tax Court of Baltimore city may require the accounts of stock furnished as

aforesaid to be verified by the oath or affirmation of the proper officer of the corporation, or may require that the stock and other books of said corporation shall be open to them for their inspection.

140. If any such president or other proper officer shall fail to perform the duties imposed upon him by the preceding section, such officer shall, on indictment and conviction, be fined therefor not less than five hundred dollars.

141. At the time of making the returns of stockholders to the County Commissioners and Appeal Tax Court of Baltimore City, as required by sections 138 and 139, the president or other proper officer of every bank or other incorporated institution incorporated under the laws of this State, or doing business therein, and of every joint stock company doing business in this State, shall furnish to the County Commissioners of each county in which such bank or other incorporated institution, or joint stock company, shall own or possess any real property, and to the Appeal Tax Court of Baltimore city, if such bank or other incorporated institution, or joint stock company, shall own or possess any real property in said city, a true statement of such real property, situated or located in such county or city; and such real property shall be valued and assessed by said County Commissioners and Appeal Tax Court, respectively, to the said bank or incorporated institution, or joint stock company so owning the same; and the said County Commissioners and Appeal Tax Court shall give duplicate certificates of such valuation and assessment to such president or other officer, who shall transmit one of such duplicate certificates with his return, to the State Tax Commissioner; and State, county or city taxes, shall be levied upon and paid by such bank or other incorporated institution, or by such joint stock company, on such assessment, in the same manner as the same are levied upon and paid by individual owners of real property in such county or city. The respective taxable values of the shares of stock in such banks, corporations and joint stock companies shall be ascertained by the State Tax Commissioner, in the manner following: he shall deduct the

assessed value of such real property belonging to the said respective banks, corporations or joint stock companies, from the aggregate value of all the shares of such respective banks, corporations or joint stock companies, and divide the residuum by the number of the shares of the capital stock, or shares of such respective banks, corporations or joint stock companies, and the quotient shall be the taxable value of such respective shares for State purposes; and when the valuation and assessment of the shares of the capital stock or shares of such bank, corporation or joint stock company, shall have been finally determined or made for State purposes, the State Tax Commissioner shall certify to the County Commissioners of each county where any such respective stockholders or shareholders may reside, and to the Appeal Tax Court of Baltimore city, if any of said stockholders or shareholders reside in said city, the assessed taxable value of such respective shares of stock or shares so ascertained as aforesaid; and the taxable value of such respective shares of stock or shares in such banks, corporations or joint stock companies, owned by residents of this State and taxable within this State, shall, for county and municipal purposes, be valued to the owners thereof in the county or city in this State in which such owners shall respectively reside; but the taxes assessed upon said respective taxable values of such respective share or shares of stock, shall be collected from such bank, corporation or joint stock company, and when so paid shall be charged by such bank, corporation or joint stock company to the account of such stockholders or shareholders, respectively; but it is expressly provided that all railroad companies worked by steam, incorporated by or under the laws of this State, and doing business in this State, shall respectively be subject to an annual State tax of one-half of one per centum upon their respective gross receipts within this State, which shall be paid and collected in the manner provided by sections 146-154 of this article; and the real and personal taxable property belonging to such respective railroad companies shall be subject to county and municipal taxation in this State, in the respective counties and cities in which such property is

located; and where such respective railroad companies are subject to such gross receipt tax for State purposes, their shares of stock and real or personal property shall not be subject to taxation for State purposes; and where such real and personal property of such respective railroad companies is subject to county and municipal taxation, their respective shares of stock shall not be subject to county and municipal taxation.

142. Any corporation having a capital stock divided into shares, and owning as an investment of part of its capital any of the stock debt of this State, upon which the State tax has been deducted by the treasurer, or of the stock debt of the city of Baltimore on which the State taxes have been paid or are payable by said city, or shares in any bank or other corporation of this State upon which the State and county or city taxes are levied and paid, or are payable by such bank or other corporation, may report the same in detail under the oath of the president, cashier, treasurer or other proper officer, to the State Tax Commissioner, and the amount of such stock debt or debts, or the assessed value of such capital stock so owned, and upon which such taxes are paid or payable as aforesaid, shall be allowed as a credit in the settlement of the taxes on the shares of capital stock of such corporation so owning the same; and any corporation not having capital stock divided into shares, and owning as an investment of part of its assets any of the stock debt of this State upon which the State tax has been deducted by the Treasurer, or of the stock debt of the city of Baltimore on which the State taxes have been paid or are payable by said city, or shares of the capital stock of any bank or other corporation of this State, upon which the State and county or city taxes are levied and paid, or are payable by such bank or other corporation, may report the same in detail, under the oath of its president, cashier, treasurer or other proper officer, to the State Tax Commissioner; and the amount of such stock debt or debts, or the assessed value of such shares of capital stock so owned, and upon which such taxes have been paid, or are payable as aforesaid, shall be allowed as a credit in the settlement of the

taxes on the assets of such corporation so owning the same; but no credit shall be allowed to any such corporations by reason of any investment on which the taxes are not paid or payable as aforesaid; nor shall such credits be allowed in any case where the officer making such return for such corporation shall fail to state in such return that said investments are owned by the corporation of which he is such officer, and are not held by such corporation as a security for any loan, or as a collateral security for any payment or other purpose.

143. The president, or other proper officers of every corporation actually engaged in the business of manufacturing in the city of Baltimore, or in any county where the tools and machinery of manufacturers have been exempted from county taxation, in addition to the return provided to be made by the preceding section, shall furnish to the Appeal Tax Court of Baltimore city, or to the County Commissioners of such county, a true statement of the mechanical tools, whether worked by hand or by steam, or other motive power, and of any machinery, manufacturing apparatus or engines owned by such corporation and actually employed and used in the business of manufacturing in said city or county; and the property so returned shall be valued and assessed by said Appeal Tax Court, or by the County Commissioners; and the said Appeal Tax Court or County Commissioners shall give duplicate certificates of such valuation to such president, or other officer, who shall transmit one of such certificates, with his return, to the State Tax Commissioner; and the State Tax Commissioner, in addition to the valuation which he is required to make for State taxation, shall make a further valuation of the stock of said corporation, by deducting from the value of each share, as assessed for State taxation, the proportionate amount of the value of tools and machinery, as assessed by the said Appeal Tax Court or County Commissioners; and the valuation of the shares thus determined shall be that for all shares taxable in the city of Baltimore for city taxes, if the said corporation is located in Baltimore City, or for the county taxes, if the county wherein the corporation is

located has exempted manufacturers' tools and machinery from taxation.

144. As soon as the State Tax Commissioner shall have valued and assessed the shares in the several banks and other corporations in this State, he shall certify and return the said valuation to the Comptroller of the Treasury, who shall at once proceed to notify the president, cashier or other proper officer of such banks or other corporations, of the said valuation and assessment of their shares, respectively, by transmitting to such president or other officer, an account of the State taxes due from such bank or other corporation under such valuation and assessment, by mail, under cover, fairly directed to such president or other officer, and shall note in a book the date of placing in the mail the envelope or cover containing such account. If no appeal be taken within thirty days from such transmission, the said valuation and assessment shall be final; but any such bank or corporation may, within thirty days after such notification, appeal from such valuation to the Comptroller of the Treasury and State Treasurer, stating in such appeal the reasons and grounds of such appeal; and said Comptroller and Treasurer shall consider the same, and if the Comptroller and Treasurer shall both be of the opinion that such valuation and assessment so made by the State Tax Commissioner is erroneous, and ought to be changed, they shall change the same accordingly, and the valuation and assessment so agreed upon by the Comptroller and Treasurer shall be final; but if either the Comptroller or Treasurer shall agree with the State Tax Commissioner as to the correctness of the valuation so made by him, then such appeal shall be dismissed, and the original valuation shall be and remain as the true valuation of such shares.

Increase of Assessment.

145. Before increasing the assessment of any property which has heretofore been assessed, or adding any new property not valued and returned to them by the proper assessor or collector, it shall be the duty of the County Commissioners or Appeal

Tax Court, as the case may be, to notify the owner of such property by a written or printed summons, containing such interrogatories in regard to such property as they may require to be answered on oath, and appointing a certain day for such owner to answer such interrogatories, either orally or in writing, and make such statement or present such proof as he may desire in the premises; and such notice shall be served on such owner, or left at his place of abode at least five days before the day of hearing appointed in such summons; and such owner may answer such interrogatories contained in such summons, and may appear on such return day and answer the same under oath, orally, before such County Commissioners or Appeal Tax Court, and may present such testimony as he may desire, and such County Commissioners and Appeal Tax Court may think necessary and proper to be heard; and in case such owner, after being summoned, shall fail to answer in writing on oath or to appear and answer orally such interrogatories, such County Commissioners or Appeal Tax Court, after such return day has passed, may proceed to revalue and reassess such property, or add such new property, according to their best judgment and information in the premises; but no such revaluation and reassessment shall be made by such County Commissioners or Appeal Tax Court without giving such notice; provided, that nothing in this section shall be construed to apply to the valuation and assessment of new improvements or new property discovered and assessed and returned to the County Commissioners or Appeal Tax Court by the proper collector or assessor, whose duty it is to assess and return the same.

Tax on Gross Receipts of Railroad Companies.

146. A State tax of one-half of one per centum is hereby levied annually upon the gross receipts of all railroad companies worked by steam, incorporated by or under the authority of this State, and doing business therein; and the said tax shall be due and payable at the treasury, on or before the first day of March in each and every year.

147. It shall be the duty of the president, treasurer or other financial officer of every such railroad company, on or before the first day of February, in each and every year, to report in writing under oath to the Comptroller of the Treasury, the total gross receipts and earnings of the company of which he is such president, treasurer or officer, from all sources, for the year ending on the preceding thirty-first day of December; and said report shall be made out in detail, as stated on the books of said company; and it shall be the duty of the said company, on or before the first day of March next succeeding the day on which the said report is hereby required to be made, to pay to the treasurer of this State the amount of the State tax so levied on the said gross receipts of the said company as aforesaid.

148. If any such president, treasurer or other financial officer shall fail or neglect to perform the duties required of him by the preceding section, for the space of thirty days after it shall be his duty so to do, said president, treasurer or financial officer so failing or neglecting, shall forfeit and pay to the State of Maryland the sum of five hundred dollars, to be recovered by action of debt in the name of the State, against such president, treasurer or officer, in any court of this State having jurisdiction; and if any such president, treasurer or financial officer shall fail and neglect to make and render the report so required of him, for the space of ninety days after the day on which it is made his duty by the preceding sections to make and render the same, said president, treasurer or other financial officer, so failing or neglecting as aforesaid, shall be deemed guilty of a misdemeanor; and shall, upon indictment and conviction thereof, suffer imprisonment not exceeding six months.

149. The Comptroller of the Treasury is hereby authorized and empowered to examine upon oath, any officer of any railroad company in this State, touching the gross receipts or revenues of said railroad company; and any such officer refusing to be sworn or to testify his information shall be guilty of a misdemeanor, and upon indictment and conviction thereof in

any court of this State having jurisdiction, shall, for every offence be fined not less than one hundred dollars nor more than five hundred dollars, in the discretion of the court.

150. If any such railroad company, from which taxes shall be due and payable on their gross receipts as aforesaid, shall fail or neglect to pay the same to the treasurer of the State for the space of one month after the same shall be due and payable as aforesaid, said company shall, for such offence, forfeit and pay to the State of Maryland an additional amount of ten per centum, as penalty or damages, to be added to the said taxes so due and unpaid; and it shall be the duty of the Comptroller to add the same to the said account, and forthwith to make out said account and certify the same under the seal of his office, and to cause suit to be brought for said taxes in the Circuit Court for the county where the principal office of such company is located, or in the Superior Court of the City of Baltimore, the Court of Common Pleas or the Baltimore City Court, if such principal office be located in said city; and the said suit shall stand for trial at the first term after service of the writ shall have been made on said company; and service of the writ aforesaid on any officer, agent or employe of such railroad company shall be deemed and taken as sufficient service on said company.

151. If, upon the return of the writ issued against such railroad company, and the said company being duly summoned as aforesaid, such company shall fail to appear, by attorney or agent, upon the call of the docket, it shall be the duty of the court to cause the personal appearance of said company to be entered, and the case shall stand for trial or hearing, and judgment shall be rendered as if said company had appeared by attorney; and if said company shall appear by attorney or agent, and either party shall desire a trial by jury, it shall be the duty of the court to cause issues to be framed, and a jury to be empanelled for the trial thereof; and if the verdict of the jury shall be for the State, judgment shall be entered without stay for the amount of the taxes so due as aforesaid, and ten per cent. additional as damages, with interest and

costs; and a fee of fifty dollars shall be allowed the attorney, to be taxed in the plaintiff's costs in said suit, and execution shall be issued on said judgment if the same be not paid into the treasury within twenty days after the rendition thereof.

152. The certificate of the Comptroller, under seal, of the amount of tax so due as aforesaid, shall be *prima facie* evidence to entitle the State to judgment for said amount, and said penalty or damages; and any engine, car or other property found in the possession of said company, or of any officer, agent or employe thereof, in the service of said company, shall be deemed and considered as the property of said company, and shall be liable to execution and sale for the payment of the said judgment and costs.

153. Whenever the road of any railroad company, organized under the laws of this State, shall extend beyond the limits of this State into any other State or States, and the return of the president, treasurer or other financial officer of said company made to the Comptroller shall not show certainly and accurately the precise amount of gross receipts within this State, the Comptroller may ascertain said amount by making the gross receipts in this State bear the same proportion to the whole gross receipts of said company, as the number of miles of said road in this State does to the whole number of miles in length of said road.

154. The property, real and personal, of all railroad companies which shall duly pay into the treasury the said annual tax on gross receipts as aforesaid, shall be exempt from taxation for State purposes.

155. The property, real and personal, of each and every railroad company in this State, working their roads by steam, shall be assessed and taxed for county and municipal purposes in the same manner as the property of individuals is now assessed and taxed; and the authorities of the several counties and the city of Baltimore, are hereby authorized and directed to proceed to assess and collect taxes on said property in the

same manner as upon like property of individuals now assessed and taxed or liable to assessment and taxation by the laws of this State; provided, that no extra assessment shall be made, and no extra or special tax shall be levied or collected on any bridge or bridges over streams, or on any tunnel forming any part of the roadway of any railroad or railroads in this State, it being the meaning and intent of this section, that any bridge over streams, or any tunnel forming a portion of the roadway of any of said railroads, shall be valued at the same rate that any other equal portion of said road is valued.

Additions by the Acts of 1890.

The following provisions were enacted during the session of the General Assembly of 1890:

SECTION 1. Be it enacted by the General Assembly of Maryland, That section one hundred and twenty-six, of article twenty-three, of the Code of Public General Laws, entitled "Corporations," sub-title "Insurance Department," be and the same is hereby repealed and re-enacted, so as to read as follows:

126. No person shall act as agent or solicitor in this State for any insurance company, including individuals, whether resident or non-resident, partnership or joint stock association, except for such companies as may be chartered under the laws of this State in any manner whatever relating to insurance risks, until all the provisions of this article relating thereto have been complied with, and there has been granted by the Insurance Commissioner a certificate of authority or license for which said company, individual, resident or non-resident, or association, or their agent, shall pay into the State Treasury, the sum of three hundred dollars; and shall also pay into the said treasury a tax of one and one-half per centum on the amount of premiums actually collected, received or secured in this State, or from residents thereof during the last license

year by or for said company, individual, resident or non-resident, partnership or association; and without any deduction for expenses for endorsements which may have been paid or for any other cause whatever; a report of the premiums so collected as above, must be made to the Insurance Commissioner under oath of the chief accounting officer of such company, or of its general agent for this State at the time of obtaining the license herein above provided for; any company applying for admission into this State shall pay for license in like proportion for a fractional part of a year, so that all licenses issued shall expire on the thirty-first day of December next ensuing; in addition to the above license and tax, there shall be paid by each insurance company, individual, resident or non-resident, partnership or association, whether of this State, or otherwise, doing business in this State, the following fees to defray the expenses of executing the provisions of this article; upon filing the declaration or certified copy of charter hereafter admitted to do business in this State, twenty-five dollars; upon filing each annual statement, twenty five dollars; for each certificate of authority which each agent of every insurance company not organized under the laws of this State is hereby required to obtain, the sum of ten dollars; provided, however, that sub-agents or solicitors who may be appointed by the general agent of any life insurance company in this State, shall only be required to pay for these respective certificates of authority, the sum of two dollars; for each abstract of their annual statements for publication, two dollars; for every copy of any paper filed in the Insurance Department, the sum of twenty cents per folio; and for affixing the official seal to such copy and certifying the same, one dollar; for valuing policies of life insurance companies, thirty dollars per million of insurance or any fractional part thereof; for official examinations of companies under this article, the actual expenses incurred; provided, that the filing of the papers with the Insurance Commissioner as required by this article, shall be in lieu of all papers now required by law to be filed with the Comptroller and Clerk of the Superior Court of Baltimore city.

An Act to provide for State taxation on the revenues of foreign, telegraph, cable, express or transportation, and railroad corporations or companies, accruing from business done in the State of Maryland.

Section 1. Be it enacted by the General Assembly of Maryland, that every telegraph or cable, express or transportation, and every railroad corporation or company organized under the laws of the United States, or of any other State or Territory of the United States, or of any foreign country, and doing business in this State, and not taxed on its shares of capital stock in this State shall, in addition to the taxes on its real property assessed in this State, pay to the State Treasurer annually, the sum of one per centum on its total gross receipts or revenues accruing from or received on account of business done in this State, and that such State tax shall be due and payable on or before the first day of July in each and every year.

Sec. 2. And be it enacted, That it shall be the duty of each and every such corporation and company so doing business in this State on or before the fifteenth day of April next, and on or before the fifteenth day of April in each and every year hereafter, to make a report under oath of its president, treasurer or other proper officer to the State Tax Commissioner, showing its total gross receipts or revenues accruing from the business done in this State for the year ending on the preceding thirty-first day of January, and it shall be the duty of the State Tax Commissioner to file such report in his office, and on or before the first day of June next, and on or before the first day of June in each and every year hereafter, to calculate the State tax due on such corporation or company on its gross receipts or revenues aforesaid for such year, and to transmit the amount of such State tax to the Comptroller of the Treasury to be collected and received into the State treasury as other State taxes are received into the treasury of this State.

Sec. 3. And be it enacted, That if any officer of any such corporation or company required to make a report as aforesaid

shall in such report or return make a false statement he shall be deemed guilty of perjury; and if any such corporation or company so doing business in this State shall neglect or refuse to make such report or return to the State Tax Commissioner within the time specified as aforesaid in any year, it shall be the duty of said Tax Commissioner to ascertain in any manner he may judge to be most available and certain, and to fix the amount of such gross receipts or revenues of such corporation or company for such year, and calculate and assess the State tax on the amount of such gross receipts or revenues as so ascertained and fixed, and to transmit the amount of such State tax to the Comptroller in the same manner as if such corporation or company had made its report or return according to the provisions of this act; and it shall be the duty of such corporation or company to pay to the State Treasurer the amount of such State tax on or before the first day of July in each and every year.

Sec. 4. And be it enacted, That it shall be the duty of the Comptroller of the Treasury to receive such accounts of State taxes so transmitted to him by the State Tax Commissioner, and forthwith to proceed to notify each such corporation or company of the amount of such State tax by transmitting by mail to the president, treasurer or other proper officer of such corporation or company an account of such State taxes enclosed in an envelope or cover, having thereon a proper postage stamp, and carefully directed to such president, treasurer or other officer, and shall note in a book to be kept for that purpose the date of placing in the mail the envelope or cover containing such account; if no appeal be taken within thirty days from the date of such notification, the said ascertainment and assessment shall be final; but any such corporation or company may, within thirty days after such notification, appeal from such ascertainment and assessment to the Comptroller of the Treasury and State Treasurer, stating in such appeal the reasons and grounds for such appeal; and the said Comptroller and Treasurer shall, as soon as possible, consider the same, and if the Comptroller and Treasurer shall both be of opinion that such

ascertainment and assessment of the State Tax Commissioner is erroneous and ought to be changed, they shall change the same accordingly, and the ascertainment and assessment so agreed upon by the Comptroller and Treasurer shall be final; but if either the Comptroller or Treasurer shall agree with the Tax Commissioner as to the correctness of the ascertainment and assessment so made by him, then the appeal shall be dismissed, and the original ascertainment and assessment shall be and remain as the true ascertainment and assessment for such year.

Sec. 5. And be it enacted, That the State Tax Commissioner be and he is hereby authorized and empowered to examine under oath, to be by him administered, any officer or agent of any such corporation or company touching the business in this State of such corporation or company and the receipts and revenues accruing therefrom; and any such officer or agent refusing to be sworn, or refusing to testify his or her knowledge touching the said subject matter, shall forfeit and pay to the State of Maryland the sum of five hundred dollars for each such refusal, to be recovered by action at law in the name of the State, against such officer or agent, in any court of this State having jurisdiction; the said State Tax Commissioner may also examine under oath any other person whom he may be advised or may believe has knowledge and information in the premises, and any such person refusing to be sworn or refusing to testify his or her knowledge in the premises, shall forfeit and pay to the State of Maryland the sum of five dollars for each such refusal, to be recovered by action at law in the name of the State against such person so refusing, before a Justice of the Peace having jurisdiction; and it shall be the duty of the State's attorney of the county or city where such refusal has occurred, on the information of the State Tax Commissioner, to bring suit for the recovery of such forfeitures as often as they may have occurred.

Sec. 6. And be it enacted, That if any such corporation or company from whom such taxes shall be due and payable on its gross receipts or revenues as aforesaid, shall fail or neglect

to pay the same to the Treasurer of the State, for the space of one month after the same shall be due and payable as aforesaid, such corporation or company shall, for such failure or neglect, forfeit and pay to the State of Maryland an additional amount of five per centum as penalty or damages, to be added to the said taxes so due and unpaid; and it shall be the duty of the Comptroller to add the same to the said account, and forthwith to make out said account and certify the same under the seal of his office, and to cause suit to be brought for said taxes in the Circuit Court for the county where the principal office of such corporation or company is located, or in the Superior Court of the city of Baltimore, the Court of Common Pleas or the Baltimore City Court, if such principal office be located in said city; and the said suit shall stand for trial at the first term after the service of the writ shall have been made on such corporation or company; and service of the writ aforesaid on any officer, agent or employe of such corporation or company, shall be deemed and taken as sufficient service on such company.

Sec. 7. And be it enacted, That if, upon the return of the writ issued against such corporation or company, and the said corporation or company being duly summoned as aforesaid, such corporation or company shall fail to appear by attorney or agent upon the first call of the docket, it shall be the duty of the court to cause the personal appearance of said corporation or company to be entered, and the cause shall stand for trial or hearing, and shall proceed, and judgment shall be rendered as if such corporation or company had appeared by attorney; and if such corporation or company shall appear by attorney or agent, and either party shall desire or require a trial by jury, it shall be the duty of the court to cause issues to be framed and a jury to be empanelled for the trial thereof; and if the verdict of the jury shall be for the State, judgment shall be entered without stay for the amount of the taxes so due as aforesaid, and the five per cent. additional as damages, with interest and cost; and a fee of fifty dollars shall be allowed the attorney for the State, to be taxed in the plaintiff's

costs in said suit; and execution shall be issued on such judgment, if the same be not paid into the treasury within thirty days after the rendition thereof.

Sec. 8. And be it enacted, That the certificate of the Comptroller, under the seal of his office, of the amount of tax so due as aforesaid, and of the said penalty or damages, shall be *prima facie* evidence to entitle the State to judgment for said amount of State taxes, and said penalty or damages, in any case in which suit may be brought for the recovery of such State taxes as aforesaid.

An Act to provide for State taxation on the revenues of railroad, telegraph or cable, express or transportation, telephone, parlor car, sleeping car, safe deposit, trust, guaranty, fidelity, oil or pipe line, title insurance, electric light or electric construction companies, incorporated under any general or special law of this State, and doing business therein.

SECTION 1. Be it enacted by the General Assembly of Maryland, That a State tax of one per centum be and is hereby levied annually upon the gross receipts of all railroad companies worked by steam, incorporated by or under the authority of this State and doing business therein; a State tax of one per centum is hereby levied annually upon the gross receipts of every telegraph or cable, express or transportation company incorporated under any general or special law of this State and doing business therein; a State tax of two per centum is hereby levied annually upon the gross receipts of all telephone, parlor car, sleeping car, safe deposit, trust, guaranty and fidelity companies incorporated under any general or special law of this State and doing business therein; a State tax of one per centum is hereby levied annually upon the gross receipts of all oil or pipe line companies and all title insurance companies incorporated under any general or special law of this State and doing business therein; and one-half of one per centum upon the annual gross receipts of all electric light or electric construction companies

incorporated under any general or special law of this State and doing business therein; if any such railroad company has part of its road in this State and a part thereof in another State or States, such company shall return a statement of its gross receipts over its whole line of road together with a statement of the whole length of its line in this State, and such company shall pay to the State at the said rates hereinbefore prescribed upon such proportion of its gross earnings as the length of its line in this State bears to the whole length of its line; and similar statements shall be made by each oil or pipe line company and each sleeping car, parlor car, express, transportation or cable car company, so that the proportion of said gross earnings of said companies respectively accruing from their business within this State may be accurately ascertained, or said ascertainment may be made in any other mode satisfactory to the State Tax Commissioner; the said gross receipt taxes shall be due and payable at the treasury on or before the first day of July in each year.

Sec. 2. And be it enacted, That it shall be the duty of each and every such corporation or company so doing business in this State, on or before the fifteenth day of April next, and on or before the fifteenth day of April in each and every year thereafter, to make a report under oath of its president, treasurer or other proper officer, to the State Tax Commissioner, showing its total receipts or revenues accruing from business done in this State for the year ending on the preceding thirty-first day of January, and it shall be the duty of the State Tax Commissioner to file such report in his office, and on or before the first day of June next, and on or before the first day of June in each and every year thereafter, to calculate the State tax due from such corporation or company on its gross receipts or revenues aforesaid for such year, and to transmit the amount of such State tax to the Comptroller of the Treasury, to be collected and received into the State treasury as other State taxes are received into the treasury of this State.

Sec. 3. And be it enacted, That if any officer of any such corporation or company required to make a report as aforesaid

shall in such report or return make a false statement, he shall be deemed guilty of perjury, and if any such corporation or company so doing business in this State, shall neglect or refuse to make such report or return to the State Tax Commissioner within the time specified as aforesaid in any year, it shall be the duty of said Tax Commissioner to ascertain in any manner he may judge to be most available and certain, and to fix the amount of such gross receipts and revenues of such corporation or company for such year, and to calculate and assess the State tax on the amount of such gross receipts or revenues as so ascertained and fixed, and to transmit the amount of such tax to the Comptroller in the same manner as if such corporation or company had made its report or return according to the provisions of this act, and it shall be the duty of such corporation or company to pay to the State Treasurer the amount of such State tax on or before the first day of July in each and every year.

Sec. 4. And be it enacted, That it shall be the duty of the Comptroller of the Treasury to receive such accounts of State taxes so transmitted to him by the State Tax Commissioner, and forthwith to proceed to notify each such corporation or company of the amount of such State tax by transmitting by mail to the president, treasurer or other proper officer of such corporation or company, an account of such State taxes, enclosed in an envelope or cover, having thereon a proper postage stamp, and carefully directed to such president, treasurer or other officer, and shall note in a book kept for that purpose the date of placing in the mail the envelope or cover containing such account; if no appeal be taken within thirty days from the date of such notification the said ascertainment and assessment shall be final, but any such corporation or company, may within thirty days after such notification appeal from such ascertainment and assessment to the Comptroller of the Treasury and State Treasurer, stating in such appeal the reasons and grounds for such appeal, and the said Comptroller and Treasurer shall as soon as possible consider the same, and if the Comptroller and Treasurer shall both be of opinion

that such ascertainment and assessment of the State Tax Commissioner is erroneous and ought to be changed, they shall change the same accordingly, and the ascertainment and assessment so agreed upon by the Comptroller and Treasurer shall be final; but if either the Comptroller or Treasurer shall agree with the Tax Commissioner as to the correctness of the ascertainment and assessment so made by him, then the appeal shall be dismissed and the original ascertainment and assessment shall be and remain as the true ascertainment and assessment for such year.

Sec. 5. And be it enacted, That the State Tax Commissioner be and he is hereby authorized and empowered to examine under oath, to be by him administered, any officer or agent of any such corporation or company touching the business in this State of such corporation or company, and the receipts and revenues accruing therefrom, and any such officer or agent refusing to be sworn, or refusing to testify his or her knowledge touching the said subject matter, shall forfeit and pay to the State of Maryland, the sum of five hundred dollars for each such refusal, to be recovered by action at law, in the name of the State, against such officer or agent in any Court of this State having jurisdiction; the said State Tax Commissioner may also examine under oath any other person whom he may be advised or may believe has knowledge and information in the premises, and any such person refusing to be sworn or refusing to testify his or her knowledge in the premises, shall forfeit and pay to the State of Maryland, the sum of five dollars for each such refusal, to be recovered by action at law, in the name of the State, against such persons so refusing, before a Justice of the Peace having jurisdiction; and it shall be the duty of the State's Attorney of the county or city where such refusal has occurred, on the information of the State Tax Commissioner, to bring suit for the recovery of such forfeitures as often as they may have occurred.

Sec. 6. And be it enacted, That if any such corporation or company from whom such taxes shall be due and payable on its gross receipts or revenues as aforesaid, shall fail or neglect

to pay the same to the treasurer of the State for the space of one month after the same shall be due and payable as aforesaid, such corporation or company shall for such failure or neglect forfeit and pay to the State of Maryland an additional amount of five per centum as penalty or damages, to be added to the said taxes so due and unpaid; and it shall be the duty of the Comptroller to add the same to the said account and forthwith make out said account and certify the same under the seal of his office, and to cause suit to be brought for said taxes in the Circuit Court for the county where the principal office of such corporation or company is located, or in the Superior Court of the City of Baltimore, the Court of Common Pleas or the Baltimore City Court, if such principal office be located in the said city, and the said suit shall stand for trial at the first term after the service of the writ shall have been made on such corporation or company, and service of the writ aforesaid on any officer, agent or employe of said corporation or company, shall be deemed and taken as sufficient service on such company.

Sec. 7. And be it enacted, That if upon the return of the writ issued against such corporation or company, and the said corporation or company being duly summoned as aforesaid, such corporation or company shall fail to appear by attorney or agent upon the first call of the docket, it shall be the duty of the court to cause the personal appearance of said corporation or company to be entered, and the cause shall stand for trial or hearing and shall proceed and judgment shall be rendered as if such corporation or company had appeared by attorney, and if such corporation or company shall appear by attorney or agent, and either party shall desire or require a trial by jury, it shall be the duty of the court to cause issues to be framed, and a jury to be empaneled for the trial thereof, and if the verdict of the jury shall be for the State, judgment shall be entered without stay for the amount of taxes so due as aforesaid, and the five per cent. additional as damages, with interest and costs, and a fee of fifty dollars shall be allowed the attorney for the State to be taxed in the plaintiff's costs in

said suit, and execution shall be issued on such judgment if the same be not paid into the treasury within thirty days after the rendition thereof.

Sec. 8. And be it enacted, That the certificate of the Comptroller, under the seal of his office, of the amount of taxes so due as aforesaid, and of the said penalty or damages shall be *prima facie* evidence to entitle the State to judgment for said amount of State taxes, and said penalty or damages in any case in which suit may be brought for the recovery of such State taxes as aforesaid.

An Act to provide for State taxation on the revenues of certain foreign corporations, mentioned in this Act, accruing from business done in the State of Maryland.

SECTION 1. Be it enacted by the General Assembly of Maryland, That every telephone company, electric light or electric construction company, parlor, palace or sleeping car company, oil or pipe line company, guano, phosphate or fertilizer company, incorporated by or under the laws of the United States, or of any other State or territory of the United States, or of any foreign country, and wishing to do business in the State of Maryland, before proceeding to transact any business in this State, either through an individual agent or agents, or through the agency of any corporation organized under the laws of this State, or to open any office for the transaction of any business in this State, shall first file in the office of the State Tax Commissioner, a certified copy of the charter, certificate or Act of incorporation, under which it claims the power to transact business as a corporation; and shall also file in the office of the Secretary of State of Maryland, a certificate of the appointment by such company or corporation, of at least two agents to reside in this State, upon whom legal process, issued out of any court of this State, may at any time be served in any action, at the suit of the State of Maryland, or of any county or incorporated city or town of this State, or of any citizen or citizens of this State, or of any corporation

organized under the laws of this State, which certificate shall state fully the names of the agents to reside in this State, and shall be certified by such foreign corporation, under the seal of such foreign corporation and the signature of its president or other proper officer, and shall, when received by the Secretary of State, be recorded by him in a book to be kept for that purpose, from which record the said Secretary of State shall be able to certify the appointment of such agents at any time; at the time of receiving such certificate, the Secretary of State shall give to such company a receipt for such certificate, which receipt shall enable such foreign corporation to commence business in this State.

Sec. 2. And be it further enacted, That any person or any officer of any such corporation who shall presume to act as agent or employe of any such foreign corporation, or to open an office for the transaction of the business of any such foreign corporation, by employing or using the patent rights, plant or property of such foreign corporation in this State in any manner as renter or bailee, or in any other manner under any contract with such foreign corporation before the provisions contained in the first section of this act have been complied with, shall forfeit and pay to the State of Maryland the sum of one hundred dollars for each and every day he may act as such agent or employe, or may occupy such office for the transaction of such business, before such provisions of the first section of this act shall have been complied with by such foreign corporation; and it shall be the duty of the State's Attorney of the city or county in which such business is transacted, or is proposed to be transacted, to prosecute and recover such penalty; and it shall be the duty of the State Tax Commissioner to inform the State's Attorney of any violation of this act of which he may be advised, and to require him to proceed to recover the penalty for such violations as prescribed in this act.

Sec. 3. And be it further enacted, That each and every such foreign corporation or company shall on or before the fifteenth

day of April next, and on or before the fifteenth day of April in each year hereafter, make a report under the oath of its president, treasurer or other proper officer to the State Tax Commissioner, setting forth and showing the total gross receipts in this State of such corporation or company for the year ending on the preceding thirty-first day of December, either from business done in this State on its own account or through its individual agent or agents, or from royalty on its patent rights, plant or property employed or hired or rented by any person or persons in this State, or by any corporation organized under the laws of this State, under any contract with such foreign corporation, or from business done in this State by any corporation organized under the laws of this State, and of which such foreign corporation may be a stockholder, and which may be employing in any manner or under any contract with such foreign corporation, and using the patent rights, plant or property of such foreign corporation for profit in this State.

Sec. 4. And be it further enacted, That every such telephone company shall pay to the State Treasurer a tax of two per centum upon the gross amount of its receipts in this State, each such oil or pipe line company shall pay to the State Treasurer a tax of one per centum upon its gross receipts in this State, and if any such oil or pipe line company has part of its transportation line in this State and part thereof in another State or States, such company shall return a statement of its gross receipts for transportation of oil or petroleum over its whole line, together with a statement of the whole length of its line and the length of its line in this State, and such company shall pay to this State at the aforesaid rate upon such proportion of its said gross receipts as the length of its line in this State bears to the whole length of its line; that each such electric light or electric construction company or corporation shall pay to the Treasurer of the State a tax at the rate of one-half of one per centum on the amount of gross receipts or revenues of such corporation in this State; that each such parlor, palace or sleeping car company shall pay to the State Treasurer a tax at the rate of two per centum upon the gross

receipts of such corporation or company in this State; that each such guano, phosphate or fertilizer company shall pay to the State Treasurer a tax at the rate of one-half of one per centum upon the amount of the gross receipts of such company so returned or ascertained as provided for in this act.

Sec. 5. And be it further enacted, That upon the receipt of such report by the State Tax Commissioner of the gross receipts in this State of any such foreign corporation or company, the said State Tax Commissioner shall cause the same to be filed in his office, and shall on or before the first day of June in each year calculate the amount of gross receipt tax to be paid by the said foreign corporation or company at the rate hereinbefore mentioned, to the Treasurer of the State, and shall send the said amount due to the State to the Comptroller of the Treasury to be received as other State taxes are now received into the treasury of this State.

Sec. 6. And be it further enacted, That if any officer of any such company or corporation required by this act to make a return as aforesaid, shall in such return make a false statement, he shall be deemed guilty of perjury; if any such corporation shall neglect or refuse to make such return within the time limited as aforesaid, the State Tax Commissioner shall ascertain by any means which he may find most practicable and available, the amount of such gross receipts and shall fix the amount of the same for the year, and unless altered upon appeal by the State Board of Appeal as hereinafter provided, such amount so fixed by him shall stand as the basis of taxation of such corporation for such year under this act.

Sec. 7. And be it further enacted, That the State Tax Commissioner be and he is hereby authorized and empowered to examine upon oath any officer, agent or employe of any such foreign corporation in this State, or any officer of any corporation of this State which may employ or use in any manner the patent rights, plant or property of any such foreign corporation for profit in this State, touching the said business and the gross receipts in this State accruing from the same, and any

such officer, agent or employe refusing to be sworn, or refusing to testify in the premises, or to give the information asked for by said State Tax Commissioner, shall forfeit and pay to the State of Maryland the sum of five hundred dollars for every such refusal; the State Tax Commissioner is also hereby authorized and empowered to examine upon oath any person whom he may be advised has information and knowledge touching such business and the gross receipts accruing from the same in this State, and any such person refusing to be sworn or refusing to testify in the premises, shall forfeit and pay to the State of Maryland the sum of five dollars for every such refusal.

Sec. 8. And be it further enacted, That when the State Tax Commissioner shall have ascertained the amount of the gross receipts of any such foreign corporation doing business in this State, and the amount of State tax on the same, he shall on or before the first day of June in each year, cause an account of the same to be filed or placed in the office of the Comptroller of the Treasury, and the Comptroller of the Treasury shall proceed at once to notify the president, treasurer or other officer or agent of such foreign corporation doing business in this State, of the amount of State tax due from such corporation, by transmitting to such president, treasurer or other proper officer or agent of such foreign corporation, an account of the State taxes due from such foreign corporation, by mail, under cover having thereon a proper postage stamp, and plainly directed to such president, treasurer or other officer or agent of such foreign corporation; and shall note in a book the date of placing in the mail the envelope, or cover containing such account; if no appeal be taken within thirty days from such transmission, the said assessment shall be final; but any such corporation may, within thirty days from such notification, appeal from such assessment to the Comptroller of the Treasury and State Treasurer, stating in such appeal the reasons and grounds of such appeal, and said Comptroller and Treasurer shall consider the same, and if after full hearing the said Comptroller and Treasurer shall both be of opinion

that such assessment and ascertainment so made by said State Tax Commissioner is erroneous and ought to be changed, they shall change the same accordingly, and the assessment so agreed upon by the Comptroller and Treasurer shall be final; but if either the Comptroller or Treasurer shall agree with the State Tax Commissioner as to the correctness of the assessment and ascertainment so made by him, then such appeal shall be dismissed and the original assessment and ascertainment shall be and remain as the true assessment and ascertainment of such gross receipts and the State tax on the same for said year.

Sec. 9. And be it further enacted, That if any such corporation or company shall neglect or refuse to pay to the State Treasurer the tax imposed by this act for the space of sixty days, after the amount of such tax has been so finally ascertained and determined, and has been so transmitted by mail to its president or other officer as directed in this act, such corporation shall for such offence forfeit and pay to the State of Maryland an additional amount of ten per centum as penalty or damages to be added to the said taxes so due and unpaid, and it shall be the duty of the Comptroller to add the same to the said account, and forthwith to make out said account and certify the same under the seal of his office, and to cause suit to be brought for said tax in the Circuit Court of the county where the principal office of the said corporation in this State is located, or in the Superior Court of Baltimore city, if such principal office be located in said city, and the said suit shall stand for trial at the first term, after service of the writ shall have been made on said corporation or company, and service of the writ aforesaid on any officer, agent or employe of such corporation, shall be deemed and taken as a sufficient service on such corporation.

Sec. 10. And be it further enacted, That if upon the return of the writ issued against such corporation, and such corporation being duly summoned as aforesaid, such corporation shall fail to appear by attorney or agent upon the call of the docket,

it shall be the duty of the Court to cause the personal appearance of said corporation to be entered, and the cause shall stand for trial or hearing, and judgment shall be rendered as if the said corporation had appeared by attorney; and if such corporation shall appear by attorney or agent, and either party shall desire a trial by jury, it shall be the duty of the Court to cause issues to be framed, and a jury to be empaneled for the trial thereof, and if the verdict of the jury shall be for the State, judgment shall be entered without stay, for the amount of tax so due as aforesaid, and ten per cent. additional as damages, with interest and costs, and a fee of fifty dollars shall be allowed the attorney for the State, to be taxed in the plaintiff's costs in said suit, and execution shall be issued on said judgment, if the same be not paid into the treasury within twenty days after the rendition thereof.

Sec. 11. And be it further enacted, That the certificate of the Comptroller, under the seal of his office, of the amount of tax so due and damages as aforesaid, shall be *prima facie* evidence to entitle the State to judgment for said amount, and said penalty or damages as charged.

Additions by the Acts of 1892.

The following provisions were added to the tax laws by the General Assembly of 1892:

~~Section 1.~~
An Act to provide for the assessment and collection of a tax upon distilled spirits.

SECTION 1. Be it enacted by the General Assembly of Maryland, That there shall be levied and collected upon all distilled spirits in this State as personal property the same rate of taxation which is imposed by the laws of the State on other property for State and county purposes.

Sec. 2. And be it enacted, That for the purpose of such assessment and collection it shall be and is hereby made the duty of each distiller, and of every owner or proprietor of a bonded or other warehouse, in which distilled spirits are stored,

and of every person or corporation having custody of such spirits, to make report to the State Tax Commissioner on the first day of January in each and every year, of all the distilled spirits on hand at such date, and the tax for the ensuing year from the said first of January, shall be levied and paid on the amount of distilled spirits so in hand, as representing the taxable distilled spirits for such year; provided, however, that the same distilled spirits shall not be taxed twice for the same year.

Sec. 3. And be it enacted, That the said Tax Commissioner upon receiving said report, shall fix the value of said spirits for the purpose of taxation under this act, and whenever the spirits are distilled by persons doing business as a corporate body and having shares of capital stock, the valuation by the Tax Commissioner shall be upon the spirits, as personal property, without reference to its capital stock which shall be treated as distinct from said distilled spirits as reported, and such valuation put upon said stock as not to produce double taxation, and the said Tax Commissioner shall without delay, transmit a copy of said valuation by mail to the Appeal Tax Court of Baltimore City, and to the Board of County Commissioners in the counties where distilleries are situate, and all distilled spirits upon the valuation and return so made, shall be subject to municipal and county taxation as all other personal property located within the bounds of any county; and the County Commissioners of the counties where distilleries are situate, and the Mayor and City Council of Baltimore are directed and required in making their annual levies to impose upon the spirits so returned and valued by the State Tax Commissioner the State taxes as the same are prescribed by law.

Sec. 4. And be it enacted, That it shall be the duty of the distiller, owner or custodian, as hereinafter indicated and described, to make quarterly reports on the first days of January, April, July and October in each year, between the first and fifth days of such months showing all deliveries during the

preceding current quarter, from his custody or care, of any part of the distilled spirits so reported; said delivery report to be made to the Tax Commissioners of this State, who shall without delay transmit a copy of such report by mail to the Appeal Tax Court of Baltimore City, and to the Board of County Commissioners of those counties in which distilleries are situate; and said distiller, owner or custodian shall also at the same time he makes a delivery report to the Tax Commissioner, make said report in duplicate to the collector or other proper officers designated by law to receive and collect taxes for the county or city in which such distillery is situate, and shall in each case along with said report to the collector, make a remittance and payment of the tax upon such distilled spirits what shall be accounted for by said officer as other State and county taxes are accounted for.

Sec. 5. And be it enacted, That no distiller, owner or custodian of such distilled spirits, shall permit the same to go from his possession or control without the report and payment of tax hereinbefore provided for, and any person or persons or corporation, violating the provisions of this section, shall be proceeded against by the proper officer authorized to receive said taxes by distraint for the entire amount of the taxes assessed for the current year, and thereupon all such taxes shall become and be immediately due and collectible by distraint, together with all costs attending the proceedings and a further penalty of five hundred dollars for each such violation.

Sec. 6. And be it enacted, That any person or corporation making any false report or return as to or of the matters herein provided for, shall be deemed guilty of a misdemeanor and subject to indictment therefor, and upon indictment and conviction shall be fined not less than one hundred nor more than one thousand dollars for each offence.

Sec. 7. And be it enacted, That it shall be the duty of all distillers, warehousemen, and others, to exhibit all necessary information on oath if required, to the Appeal Tax Court of Baltimore city, the several boards of County Commissioners

in the respective counties where distilleries are situate, and to any authorized officer proceeding to execute a distrain or to collect the tax imposed under this act; and a failure so to do upon demand made, shall be deemed a misdemeanor, and subject to indictment, and upon indictment and conviction shall subject the offender to a fine of not less than fifty dollars nor more than five hundred dollars.

Sec. 8. And be it enacted, That any warehouseman, custodian or agent, paying the tax on distilled spirits herein provided for, shall have a lien upon the distilled spirits covered by such tax.

Sec. 9. And be it enacted, That the reports and returns presented by this act, shall as far as possible describe the distilled spirits by name, serial numbers, dates and other convenient identifications.

Sec. 10. And be it enacted, That it shall be the duty of the Tax Commissioner of the State to devise and prescribe such forms and blanks for reports and returns as may be needed or useful for carrying out the provisions of this act.

Sec. 11. And be it enacted, That all acts and parts of acts inconsistent herewith are hereby repealed.

SENATE BILL OF 1892.

SECTION 1. Be it enacted by the General Assembly of Maryland, That sections 1, 2, 4, 141 and 146 of Article 81 of the Code of Public General Laws, title "Revenue and Taxes," be, and the same are hereby repealed and re-enacted, with amendments, so as to read as follows :

1. All State and county taxes and all municipal taxes shall be levied upon the assessments made agreeably to the provisions of this article.

What is to be Assessed.

2. All interests, shares or proportions owned by residents of this State, in all ships or other vessels, whether such ships or

other vessels be in or out of port, are and shall be subject to valuation and assessment to the respective owners thereof in the county or city in this State in which said owners shall respectively reside. All real property in this State belonging to any bank incorporated under the laws of this State, or any other State, or to any National bank located in this State, or to any company or corporation incorporated by or under the laws of this State, or of any other State, or under the laws of the United States, or of any territory, or the District of Columbia, or to any joint stock company doing business in this State, are and shall be subject to valuation, assessment and levy of taxes thereon for State, county and municipal purposes, as the property of such bank, company, corporation or joint stock company, and such bank, company, corporation or joint stock company shall pay taxes thereon so assessed and levied. All money belonging to residents of this State, the proceeds of the sale of stock, bonds or other property disposed of for the purpose of evading and escaping taxation, all shares in any joint stock company, and all shares of stock in any bank incorporated under the laws of this State, or in any National bank located in this State, or in any corporation incorporated under the laws of this State, other than railroad companies working their respective roads by steam power, not exempted from taxation by irrevocable contract with this State, are and shall be subject to assessment and valuation to the owners thereof in the county or city in this State in which said owners may respectively reside, in the manner provided for by the laws of this State; and the taxable values of such shares shall be ascertained and finally determined, and the taxes thereon levied and collected in each year under the regulations hereinafter prescribed, or as the same may now be or hereafter provided by law. All shares of stock or shares in any bank other than a National bank, or in any company or corporation incorporated by or located in and doing business in any other State or District of Columbia, or in any Territory, or country, owned by residents of this State, shall be valued and assessed to the owners thereof in the manner prescribed by this article. All

bonds made or issued by any State or District of Columbia, or Territory, or by any corporation belonging to the residents of this State; all investments in private securities of every kind and description belonging to residents of this State, the real property located in this State, and the personal property owned by any corporation incorporated by this State not having a capital divided into shares, or, having shares of capital stock which are wholly or in part exempted from taxation by this State, when the said real or personal property so owned by said corporation is not protected from taxation by the exemption of said shares of stock from taxation; all certificates of indebtedness or evidence of debt in whatever form, made or issued by any State, Territory, country, District of Columbia, public corporation or foreign country, owned by residents of this State, shall be subject to valuation and assessment to the owners thereof in the county or city in which owners may respectively reside. And all other property of every kind, nature and description within this State, shall be valued to the respective owners thereof in the manner prescribed by this article, and shall be assessed and taxed as the property of such respective owners, according to such prescribed methods of valuation, except as prescribed in section 3 of this Article; the property, real and personal, of each and every railroad company in this State working their roads by steam power, shall be assessed and taxed for county and municipal purposes in the same manner as the property of individuals is now assessed and taxed; provided, that no extra assessment shall be made, and no extra or special tax shall be levied or collected on any bridge or bridges over streams forming any part of the roadway of any railroad or railroads, or turnpike companies in this State, it being the meaning and intent of this Act that any bridge over streams forming a portion of the roadway of any of said railroads and turnpikes shall be valued at the same rate that any other equal portion of said road is valued; and provided, further, that all tunnels or subways forming a part of the roadway or subway of any railroad, turnpike company or other corporations shall be valued

at their actual worth, as other property in this State is required to be valued under the provisions of this Act. "And the provisions of section 155 of this Article, in so far as the same are in conflict with the preceding provisions of this section relating to tunnels is hereby expressly repealed." The shares of capital stock of National Banks located in this State, and of other corporations incorporated under the laws of this State, belonging to citizens of this State, shall be valued to the owners thereof in the city of Baltimore and in several counties of this State at the same rate at which the same are valued by the State Tax Commissioner for the year eighteen hundred and ninety-two; and it shall be the duty of the State Tax Commissioner to furnish the assessors in the city of Baltimore, and of several counties, with a copy of the assessment of the shares of capital stock of each such bank and other corporations of this State. All bonds and certificates of debt bearing interest, issued by any railroad or other corporation of this State, secured by mortgage of property wholly within this State, shall be subject to valuation, assessment and taxation to the owner or owners thereof in the same manner as like bonds or certificates of debt, bearing interest and secured by mortgage of property partly in this State and partly in some other State or States, are now subject under the laws of this State, but the taxes thereon shall be paid by the corporation issuing such bonds or certificates.

What is to be Exempted.

4. The provisions of sections 2 and 3 of this Article shall not apply to any bonds or stock or evidence of debt issued by the United States, or to any property belonging to the United States or to this State, or to any county or incorporated city or town in this State, nor to houses or buildings used exclusively for public worship, or to the furniture contained therein or to the parsonages connected therewith, or to the grounds appurtenant to such houses, or to buildings so exclusively used for public worship, or as parsonages, which are necessary for the respective uses thereof, nor shall the provisions of said sections

apply to grave-yards, cemeteries or cemetery companies, which do not accumulate profits for any purpose except the maintenance or improvement of such cemeteries or grave-yards, as cemeteries or grave-yards, nor to burying grounds set apart for the use of any family or belonging to any church or congregation, or to crop or produce of any land in the hands of the producer or his agent, or to provisions and fuel kept for the use and consumption of the family of the person to whom the same shall belong; or to the working tools of the mechanics, moved or worked exclusively by hand, or to wearing apparel of any description, except watches, diamonds and other costly jewelry not habitually worn on the person; or to fish while in the possession of the fisherman employed in catching, salting and packing the same, or while in the possession of their agents unsold; or to buildings, equipment and furniture of hospitals, asylums, charitable or benevolent institutions, or to the ground appurtenant thereto in any city or incorporated town of this State, which is necessary to the respective uses thereof; nor to the buildings, equipments and furniture of hospitals, asylums, charitable or benevolent institutions in any county of this State, but not within any city or incorporated town in this State, nor to the ground not exceeding forty acres appurtenant respectively thereto which is necessary for the respective uses thereof; nor to the buildings, furniture, equipment or libraries of incorporated educational or literary institutions, or to the ground appurtenant thereto, in any city or incorporated town in this State, which is necessary for the respective uses thereof; nor the buildings, furniture, equipment or libraries of incorporated educational or literary institutions in any county of this State; nor to the ground not exceeding forty acres, appurtenant, respectively thereto, which is necessary for the respective uses thereof; nor the real or personal property of any corporation incorporated by this State and having capital stock divided into shares when said shares of said corporation are only subject to taxation under the laws of this State; nor to any shares of stock in any corporation when said shares of stock are exempted

by irrevocable contract with this State from taxation under the laws thereof; nor to any property of any corporation whose shares of capital stock are exempted from taxation when said property is protected from taxation by the exemption of said shares from taxation; nor to the shares of stock of railroad companies worked by steam, incorporated by or under the laws of this State, which are subject to State taxation upon their gross receipts within this State, and to county and municipal taxation upon their respective real and personal taxable properties in the respective counties and cities of this State, in which such respective properties are located; nor the book accounts or bills receivable, or evidences of debt given for such accounts of any person engaged in commercial business, who is taxed upon a fair average value of his stock of goods, wares and merchandise; and every person engaged in commercial business shall be taxed upon the fair average value of his stock in such business, during the year preceding the assessment upon which such tax is levied; nor to the value of such portions of the shares of homestead or building associations as may be represented by mortgage upon real or leasehold property within this State, when such real or leasehold estate so mortgaged is subject to taxation under the laws of this State; nor to mortgage debts secured thereby, nor to mortgages wholly within this State, nor to the mortgage debts secured thereby, except bonds and certificates of debts bearing interest, issued by any railroad corporation or other corporation of this State, secured by mortgage of property wholly within this State, which shall be liable to assessment and taxation as provided in section 88 of this article; and all public general laws inconsistent with these provisions are hereby repealed, and each and every one of said exemptions from taxation shall be strictly construed.

How to Make Returns.

141. At the time of making the returns of stockholders to the County Commissioners and Appeal Tax Court of Baltimore City, as required by law, the president or other proper

officer of every bank or other incorporated institution incorporated under the laws of this State, or doing business therein, and of every joint stock company doing business in this State, shall furnish to the County Commissioners of each county in which such bank or other incorporated institution or joint stock company shall own or possess any real property, and to the Appeal Tax Court of Baltimore City, if such bank or other incorporated institution or joint stock company shall own or possess any real property in said city, a true statement of such real property situated or located in such county or city; and such real property shall be valued and assessed by said County Commissioners and Appeal Tax Court, respectively, to the said bank or incorporated institution or joint stock company so owning the same; and said County Commissioners and Appeal Tax Court shall give duplicate certificate of such valuation and assessment to such president or other officer, who shall transmit one of such duplicate certificates with his return to the State Tax Commissioner, and State, county and city tax shall be levied upon and paid by such bank or other incorporated institution, or by such joint stock company on such assessment in the same manner as the same are levied upon and paid by individual owners of real property in such county or city; the respective taxable values of the shares of stock in such banks, corporations and joint stock companies shall be ascertained by the State Tax Commissioners in the manner following: He shall deduct the assessed value of such real property belonging to the said respective banks, corporations or joint stock companies from the aggregate value of all shares of such respective banks, corporations or joint stock companies, and divide the remainder by the number of the shares of capital stock or shares of such respective banks, corporations or joint stock companies, and the quotient shall be the taxable value of each of such respective shares for State purposes; and all State taxes thereon shall be paid as provided in section 84 of this article; and when the valuation and assessment of the shares of the capital stock, or shares of such banks, corporations or joint stock companies

shall have been finally determined or made for State purposes, the State Tax Commissioner shall certify to the County Commissioners of each county where any of such respective stockholders or shareholders may reside, and to the Appeal Tax Court of Baltimore city, if any of said stockholders or shareholders reside in said city, and the County Commissioners of the county in which such bank, corporation or joint stock company is situated, or to the Appeal Tax Court of Baltimore city, if it is situated in said city, the assessed taxable value of such respective shares of stock, or shares so ascertained as aforesaid; and the said taxable values of such respective shares of stock or shares in such bank, corporation or joint stock companies, owned by residents of this State and taxable within this State, shall, for county and municipal purposes, be valued to the owners thereof in the county or city in this State in which such owners shall respectively reside; and the said taxable value of such said stock or shares as is held by non-residents of this State, shall for county and municipal purposes, be valued to the owners thereof in the county or city in which said bank, corporation or joint stock company is situated; but all county or municipal taxes assessed upon said respective taxable values, of such respective share of stock or shares shall be collected from such bank, corporation or joint stock company, and when so paid shall be charged by such bank, corporation or joint stock company, to the account of such stockholders or shareholders, respectively; but it is expressly provided, that all railroad companies worked by steam, incorporated by or under the laws of this State and doing business in this State, shall respectively be subject to the annual State tax upon their respective gross receipts within the State prescribed by section one hundred and forty-six of this article, which shall be paid and collected in the manner provided for by this article, and the real and personal taxable property belonging to such respective railroad companies shall be subject to county and municipal taxation in this State in the respective counties and cities in which such property is located, and where such respective railroad companies are subject to such gross receipts tax for State

purposes, their share of stock and real or personal property shall not be subject to taxation for State purposes, and where such real and personal property of such respective railroad companies is subject to county and municipal taxation, their respective share of stock shall not be subject to county and municipal taxation. The provisions of this section as to such railroad companies shall be applicable to every telegraph or cable company, telephone company, electric light or electric construction company, gas company, every parlor, palace or sleeping car company, every oil or pipe line company, every express or transportation company by land or water, every title insurance company, and every safe deposit, trust, guarantee and fidelity company of every description, incorporated under any general or special law of this State and doing business therein; all of which said corporations of every kind shall be subject to the State tax on their gross receipts particularly specified in section one hundred and forty-six of this article, and the provisions of sections one hundred and forty-seven to one hundred and fifty-three, both inclusive, of this article, "except so far as any of said sections may be modified or repealed by this act," applicable to railroad companies worked by steam, shall be equally applicable to each and all of said last above enumerated corporations incorporated under any general or special law of this State and doing business therein, "as well as to the above enumerated corporations incorporated by and under the laws of any other State, Territory, District or foreign country and doing business in this State," but the capital stock and property of such corporations other than railroad companies shall be valued, assessed and taxed for State, county and municipal purposes, like the capital stock and property of other corporations under this article. Every unincorporated association, partnership or individual engaged in any one or more of the above specifically enumerated branches of business shall be subject to said gross receipts tax, and shall comply with all the provisions of this article with reference thereto as fully as if such association, partnership or individual were a corporation.

Franchise Taxes.

146. A State tax, as a franchise tax, is hereby levied annually upon the gross receipts of all railroad companies worked by steam incorporated by or under the authority of this State and doing business therein, and all repealable contracts by the State with such railroads, and all repealable laws which impose a less or different tax rate on gross receipts of such railroads than the said tax on gross receipts named in this section or which may be hereafter imposed by law are hereby repealed, such State tax being as follows, to wit: 8-10ths of one per cent. on the first one thousand dollars per mile of gross earnings, or on the total earnings, if they are less than one thousand dollars per mile; one and one-half per cent. on the first thousand dollars, or part thereof, above one thousand dollars per mile, and up to two thousand dollars per mile, and when the earnings exceed two thousand dollars per mile, two per cent. on all earnings above that sum; a State tax, as a franchise tax, of two per centum is hereby levied annually upon the gross receipts or earnings of every telegraph or cable, express or transportation, telephone, parlor car, sleeping car, safe deposit, trust, guarantee and fidelity company incorporated under any general or special law of this State, and doing business therein; a State tax, as a franchise tax, of one per centum is hereby levied annually upon the gross receipts, or earnings of all oil or pipe line companies, and all title insurance companies incorporated under any general or special law of this State and doing business therein, and one and a-half per centum upon the annual gross receipts or earnings of all electric light or electric construction companies and gas companies incorporated under any general or special law of this State and doing business therein. If any such railroad company has part of its road in this State and part thereof in another State or States such company shall return a statement of its gross receipts over its whole line of road, together with a statement of the whole length of its line in this State, and such company shall pay to the State at the said rates hereinbefore prescribed upon such proportion of its

said gross earnings as the length of its line in this State bears to the whole length of its line; and similar statements shall be made of such oil or pipe line company and each sleeping car, parlor car, express, transportation, telephone or telegraph or cable company, so that the proportion of the said gross earnings of said companies, respectively, accruing from their business within this State, may be accurately ascertained, or said ascertainment may be made in any other mode satisfactory to and required by the State Tax Commissioner. The said gross receipts taxes shall be due and payable at the Treasury on or before the first day of July in each year. All the provisions and requirements of this section shall be in force and apply to all corporations of a like kind to those above enumerated which are doing business in this State and which are incorporated by and under the laws of any other State, District, Territory or foreign country.

Sec. 2. And be it further enacted, That the thirty-four following sections be and they are added to said Article eighty-one of the Code of Public General Laws, title "Revenue and Taxes," to be designated as sections 164 and 197, both inclusive.

(Sections 164, 165 and 166 relate to the appointment of assessors and other officers, and are omitted, as they have no bearing upon the subject as publicly discussed.)

Boards of Control and Review.

167. That the Governor of the State, by and with the advice and consent of the Senate, shall also appoint three suitable persons in each county having adequate knowledge of the value of property therein, who shall be a Board of Control and Review for said county; he shall also appoint three suitable persons in the first four wards of Baltimore city, who shall be a Board of Control and Review for the first four wards of said city. The said Board shall be known as the Board of Control and Review for Baltimore city, number one. He shall also appoint three suitable persons in the fifth, sixth, seventh and eighth wards of Baltimore city, who shall be a Board of Control and Review for the said fifth, sixth, seventh and eighth

wards. The said Board shall be known as the Board of Control and Review for Baltimore city, number two. He shall also appoint three suitable persons in the ninth, tenth, eleventh and twelfth wards of Baltimore city, who shall be a Board of Control and Review for the said ninth, tenth, eleventh and twelfth wards. The said Board shall be known as the Board of Control and Review for Baltimore city, number three. He shall also appoint three suitable persons in the thirteenth, fourteenth, nineteenth and twentieth wards of Baltimore city, who shall be a Board of Control and Review for the said thirteenth, fourteenth, nineteenth and twentieth wards. The said Board shall be known as the Board of Control and Review for Baltimore city, number four. He shall also appoint three suitable persons in the fifteenth, sixteenth, seventeenth and eighteenth wards of Baltimore city, who shall be a Board of Control and Review for the said fifteenth, sixteenth, seventeenth and eighteenth wards. The said Board shall be known as the Board of Control and Review for Baltimore city, number five. He shall also appoint three suitable persons in the twenty-first and twenty-second wards of said city to be a Board of Control and Review for said twenty-first and twenty-second wards of said city. The said Board shall be known as the Board of Control and Review for Baltimore city, number six. Each of the said persons so appointed to be members of the said respective Boards of Control and Review shall be property owners and taxpayers, and shall have resided in the county, or in one or more of the wards of the said city of Baltimore for which he is appointed for at least "one" year before his said appointment, and shall have adequate knowledge of the value of property in the locality for which he is appointed, and all members of the Board of Control and Review provided for in this act, except appointments to fill vacancies after the adjournment of the Senate, shall be made by the Governor by and with the advice and consent of the Senate.

Pay of Officials.

168. That the assessors appointed under this act, and each person appointed under this act, as one of a Board of Control

and Review shall receive the sum of three dollars and fifty cents, except those appointed for Baltimore city, whose compensation shall be five dollars per day for every day of actual services by him performed under this act. Each Board of Control and Review appointed for any county in the State shall have the right to appoint a clerk, who shall receive for each day of actual service as such clerk the sum of three dollars and fifty cents per day, and who shall be subject to removal at the pleasure of said board; each Board of Control and Review appointed for the city of Baltimore shall have the right to appoint two clerks to said board, who shall each receive for each day of actual service as such clerks, the sum of three dollars and fifty cents per day, and shall each be subject to removal at the pleasure of said respective boards; the compensation of said assessors, members of the Board of Control and Review and clerks appointed for the several counties in this State, shall be paid by the county in which their duties are respectively performed; and the compensation of the said assessors appointed for the assessment districts in the city of Baltimore, and of the members of the Boards of Control and Review appointed for said city, and of their clerks, shall be paid by the Mayor and City Council of Baltimore; the accounts for services rendered by the members of the Board of Control and Review, and clerks to said boards, in the respective counties, shall be approved by the County Commissioners of the respective counties before the same are paid, and the accounts for services rendered by the members of the Boards of Control and Review, and the clerks to said boards in the city of Baltimore, shall be approved by the Appeal Tax Court of Baltimore City before the same are paid.

Power of Removal.

169. That the Governor of the State shall have power to remove at any time for cause any assessor or assessors or member or members of any Board of Control and Review appointed under this act, and to appoint another person or persons duly qualified to perform the duties of said office or offices in the

place of the respective person or persons removed from office, and the person or persons so appointed shall qualify in the same manner as if he or they had been originally appointed under this act by the Governor.

The Oath of Office.

170. That every assessor and every person appointed to any Board of Control and Review and every clerk appointed under the provisions of this Act, shall, before he enters upon the duty of said office of assessor, members of the Board of Control and Review or clerks, take the following oath or affirmation before some person authorized by law to administer an oath or affirmation, to wit: "I ———, do swear or solemnly and sincerely and truly declare and affirm that, as, naming the wards or assessment district for which he is appointed assessor, or as a member of the Board of Control and Review, naming the county or districts, or as clerk to the Board of Control and Review for, naming the county or district, I will, to the best of my skill and judgment, execute the duties of the said office diligently and faithfully, according to the directions of this Act under which I am appointed, entitled an Act to provide for the general valuation and assessment of property in this State, without favor, affection or partiality," which said oath or affirmation, properly attested by a Justice of the Peace or other competent person before whom the same shall have been taken, shall be filed by the person taking the same within ten days after his appointment in the office of the County Commissioners of that county in which or in any part of which his said duties are to be performed, and in the office of the Appeal Tax Court of the city of Baltimore, if his duties are to be performed in said city or in any part thereof.

171. That it shall be the duty of the said County Commissioners of the several counties and of the Appeal Tax Court of Baltimore city to notify the Governor of any failure on the part of any person appointed assessors for any part of their respective counties, or of the city of Baltimore, or a member of any Board of Control and Review for their respective

counties, or for any part of the city of Baltimore to qualify as aforesaid, and to notify any Board of Control and Review of the failure of any clerk or clerks by it appointed to qualify as aforesaid, and upon receiving notice of the failure of any persons appointed as assessors or members of a Board of Control and Review so to qualify, the Governor shall forthwith appoint another person to the said office, and on the failure of any clerk to any Board of Control and Review so to qualify, the said Board of Control and Review shall forthwith appoint another person to the said office, and the said respective powers of appointment by the said Governor and by the said respective Boards of Control and Review shall be exercised whenever any vacancy shall occur in the office of assessors, members of the Board of Control and Review or clerk created under this Act.

Schedules and Interrogations.

172. That the State Tax Commissioner be and he is hereby directed to prepare, forthwith, printed instructions and forms for the guidance and direction of the assessors, members of the Board of Control and Review, and clerks to said boards appointed under the provisions of this act, but such instructions shall be in all particulars in conformity with the provisions of this act, and he shall transmit to each of said assessors, members of said Board of Control and Review and clerks, two printed copies of the forms and instructions, so by him prepared for their use, respectively; that it shall be his duty to prepare and have printed at the expense of the State, a full and complete form of schedule of all kinds of personal property which are now or may at any time be subject to taxation under the laws of this State, to which he may add such interrogations as he may deem proper for the purpose of securing a full disclosure of all such property, and he may from time to time change the form of such schedule or interrogatories or make such additions thereto as he may deem proper; and the said State Tax Commissioner shall cause the said forms of schedule and interrogatories to be delivered to the said asses-

sors, the respective Board of County Commissioners of the several counties of this State and the Appeal Tax Court of Baltimore city, at such times as may be necessary for the purpose of carrying into effect the provisions of this act.

When the Work Begins.

173. That the said assessors appointed under the provisions of this act for the said several assessment districts of any county in this State shall assemble at the places in their respective counties at which the Circuit Court for said respective counties are usually held, on the first Tuesday in May in the year eighteen hundred and ninety-two, except in Baltimore county, in which county the assessors of said county shall so assemble on the third Tuesday in July in the year eighteen hundred and ninety-two, and thereupon enter upon the performance of their respective duties; and the assessors appointed under this act for the several assessment districts in the city of Baltimore shall assemble at the City Hall in said city on the same day, and thereupon enter upon the performance of their respective duties, and the assessors so assembled in the respective localities as aforesaid shall primarily proceed to consider their respective duties under this act and the instructions of the State Tax Commissioner, and the forms prepared for their use, to the end that their said respective duties may be uniformly discharged and performed, except in such counties where there are district assessors, for the district in which said Circuit Court is held, shall meet at the time and place above mentioned and proceed to the performance of their duties under this act for said district, and upon the completion of their duties in said district the said assessors at large shall proceed to assess the property therein required in some other or adjacent district, first calling to their assistance and to act jointly with them in the performance of their duties, the assessor for said district, and so on through the whole county; but nothing herein shall be so construed as to permit any district assessor to assess or join in assessing any property outside of the district for which he may be appointed as aforesaid,

and any district assessor shall only be paid for the time he may be engaged in assessing the property in the district for which he shall be appointed.

174. That the members of the several Boards of Control and Review, appointed under the provisions of this act for the several counties of this State, shall assemble at the places in their respective counties at which the Circuit Court of said respective counties are usually held, on the second Tuesday in September, in the year eighteen hundred and ninety-two, or the day on which they shall be notified by the County Commissioners of their respective counties to assemble; and it shall be the duty of said County Commissioners to notify the several Boards of Control and Review to assemble as soon as the assessors shall have made their return, and thereupon enter upon the performance of their respective duties; and the members of the six Boards of Control and Review, appointed under this act for the six districts of the city of Baltimore, shall assemble at the City Hall, in said city, and thereupon enter upon the performance of their respective duties, on the day on which they shall be notified by the Appeal Tax Court to assemble; and it shall be the duty of said Appeal Tax Court to notify the several Boards of Control and Review to assemble as soon as any one or more wards or assessment districts shall have been completed in their respective districts; and the said respective members of the said Boards of Control and Review, when so assembled in the said several localities, shall proceed to consider their said respective duties under this act and the instructions of the State Tax Commissioner, and the forms prepared for their respective use, to the end that their respective duties may be properly discharged and performed.

175. That it shall be the duty of the County Commissioners of the several counties and of the Mayor and City Council of Baltimore, respectively, to provide and assign proper places in their said respective counties and in the city of Baltimore for the meetings and accommodation of their respective assessors and Boards of Control and Review, during the times in which

they are engaged in performing their respective duties under this act.

Questions Under Oath.

176. That every assessor and member of any Board of Control and Review shall have power to administer oaths and take affirmation, and shall require every person questioned by him to answer under oath or affirmation any question concerning the amount, character, location, value, tenure or proprietorship of any property or money owned by himself or any other person, and any person who shall refuse to answer any such question when asked by an assessor or member of any Board of Control and Review, in the course of his official duty, or any person who shall refuse to be sworn or affirm, when required by any assessor or member of any Board of Control and Review, in the course of his official duty, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding three hundred dollars, or by imprisonment in the county or city jail for not more than six months, or both, in the discretion of the court.

Returns to be Made.

177. That the president or other proper officer of every bank, State or National, located in this State, and of every corporation incorporated by or under the laws of this State, and of every association or company located or doing business in this State, whose capital is represented by shares of stock or shares, shall, on or before the first day of July next, make returns on his oath or affirmation, and transmit to the County Commissioners of each county of this State, and to the Appeal Tax Court of Baltimore city, a list of the stockholders or shareholders in such bank, corporation, association or company who, respectively residing in the county or city of Baltimore to which such return is made, so far as the place of residence of such shareholders or stockholders is known to him or can be discovered by him upon inquiry, together with the number of shares of stock or shares held by each of such stockholders or shareholders; and he shall also make returns of, on

his oath or affirmation, and transmit to the County Commissioners of the county in which the said bank, corporation, association or company has its principal place of business, or to the Appeal Tax Court of Baltimore city, if such bank, corporation, association or company has its principal place of business therein, a list of the stockholders or shareholders of such bank, corporation, association or company who are non-residents of this State, together with the number of shares held by each of said non-residents; in case no stockholders or shareholders of said bank, corporation, association or company shall reside in the county of the County Commissioners whereof the said return is made, or in the city of Baltimore, if the said return be thereto made, the said president or other proper officer of said bank, corporation, association or company shall so make returns, on his oath or affirmation. Any bank, corporation, association or company whose president or other proper officer shall neglect or refuse to make such return upon his oath or affirmation, shall pay to the Mayor and City Council of Baltimore, if it has neglected or refused to make such returns to the Appeal Tax Court of Baltimore city, or to the County Commissioners of any county to whom it has neglected or refused to make such returns, the sum of one hundred dollars for each day after the said first day of July, until said return is made as is required by this act, to be recovered by the Mayor and City Council of Baltimore or the said County Commissioners, as the case may be, by suit in any court having jurisdiction of the said case. The said County Commissioners of the said respective counties shall deliver the said returns, when so received, to the Boards of Control and Review for their respective counties, and the Appeal Tax Court of Baltimore city shall forthwith deliver a copy of the returns so to it made to each of the Boards of Control and Review for Baltimore city.

The Listing Feature.

178. That it shall be the duty of the said assessors to deliver or cause to be delivered, or to send by mail to each person in

their respective assessment districts, who shall own any personal property subject to taxation under the laws of this State, at least two days before the said assessors shall call upon said persons for the purpose of assessing the property of such person, a copy of the schedule provided in section one hundred and seventy-two of this act; and each person receiving a copy of the said schedule shall fill and sign the same immediately upon the receipt thereof, and deliver the same to the said assessors when they shall call for the purpose of assessing his or her property; and it shall be the duty of the respective Boards of County Commissioners of the several counties of this State, on or before the first day of January, in the year eighteen hundred and ninety-six, and on or before the same day in every fourth year thereafter, cause a copy of the said schedule to be sent by mail to every person in their respective counties, as far as they may know or be able to ascertain them; and the Board of Police Commissioners of Baltimore city shall cause the police officers in said city, during the first week in January, in the year eighteen hundred and ninety-six, and during the same week in every fourth year thereafter, to deliver at every house in said city one copy of said schedule for each person of or over the age of twenty-one years, residing therein, and at every store, office, shop or other place of business, one or more copies of the said schedule.

179. That it shall be the duty of every person residing in any county or city of this State, and of every person who owns any personal property permanently located in any county or city of this State, though he does not reside therein, to deliver to the assessors of his or her district a copy of the schedule in section one hundred and seventy-two of this Act provided, duly filled and signed, on or before the day on which the said assessors shall call upon such person for the purpose of assessing his property, and to the Board of County Commissioners of the county in which said person may reside, or said property be permanently located, or to the Appeal Tax Court of Baltimore city, if the said person shall reside in the city, or the said property be "permanently" located therein, on or before

the fifteenth day of January, in the year eighteen hundred and ninety-six, and on or before the same day in every "fourth" year thereafter; and every person returning such schedule shall fully and particularly set forth all personal property owned or possessed by him not prior thereto returned by him, and which is not then included in his assessment, at twelve o'clock noon on the tenth day of January, in the year for which said returns are made. Every partnership concern, trustee, administrator, guardian, committee of a lunatic, and every agent of any person not residing or being at that time in the said county or city, and every person having any manner of title to or having possession of, holding or claiming in any manner anything required to be returned in said schedule, shall be within the provisions of this section, and comply with the same. Whenever property is owned, held or possessed by more than one person as administrator, executor, trustee, or in any other representative capacity, any one of them may make, sign and return the schedule thereof. Every schedule of copartnership property shall be signed by at least one of the members of the partnership. Every person knowingly signing any schedule containing any wilfully false statement shall be guilty of a misdemeanor, and upon conviction thereof, shall be sentenced to "pay a fine amounting to double the amount of taxes which would have been due upon such property if the same had been duly returned in such schedules and valued for the purpose of taxation, and in the trial of said cause the jury shall have the right and it shall be their duty to find from the evidence the amount of taxes which would have been due upon said property, if the same had been duly returned in said schedule." No person shall be in anywise excused for any failure to comply with the provisions of this section, because he received no form of schedule, but in such case he shall procure a form and return his schedule in due time. The schedules herein provided shall be returned in the counties of the State on or before the first day of April, provided the County Commissioners of any county may require said returns to be made on or before an earlier day than that

named herein. Said schedules in Baltimore city shall be returned on or before the first day of February, or at an earlier day, if the Appeal Tax Court of Baltimore City shall so order. The schedules required to be returned by this act shall not be inspected by the public or any person other than those whose official duty may require them to inspect the same, and such officials shall in no case divulge the contents of the same unless required to do so before a judicial or other tribunal, and a violation of this provision by any such official named in this act and appointed by the Governor shall be justifiable cause for his removal at once by the Governor, and shall be taken and considered as a violation of the oath of office prescribed by this act. (The violation of this secrecy is also made a misdemeanor, punishable by fine.) This provision prohibiting the divulging the contents of said schedules shall apply to the County Commissioners, members of the Appeal Tax Court of Baltimore City, State Tax Commissioner and their employes, as well as all other officers who may by virtue of their official duties have access to said schedules, and their respective official oaths be considered and taken as including the observance of this provision. Nothing herein contained shall be construed as preventing or prohibiting the use of said schedules as evidence in the trial of any case in any court of this State when the party or person who signed and returned the same, or in whose behalf the same was signed and returned, is sued or indicted under any of the provisions of this act, nor shall the provisions of this section prevent the entries in the proper books of the tax officials of the aggregate of the several classes or denomination of the property embraced in said schedules, and it shall be the duty of said tax officers to preserve such schedules in some safe and secure place until the next valuation and assessment of personal property shall be made.

To Search for Property.

180. Between the first Tuesday in May and the second Tuesday of September, in the year eighteen hundred and ninety-two, each of the assessors of the several respective

assessment districts in every county, and city of Baltimore, shall, in the manner provided for in this Act, whenever he may deem it necessary, view all goods and chattels in the respective assessment districts and shall diligently investigate and inquire by personal inspection and all lawful means inform himself of all property therein or belonging to residents thereof and required to be returned, and he shall value the same at its full cash value without looking to a forced sale; and when he is valuing the property of any person who has returned the schedule required by section one-hundred and seventy-nine, he shall take such schedule with him and set down his valuation of the property returned therein in the proper column opposite the valuation thereof by the owner or person returning such schedule, and he shall make all valuations upon his own judgment, and shall not be concluded by the valuations made by the owner or person returning the schedule. All property permanently located in any county of this State, or in the city of Baltimore, shall be valued and assessed to the owner thereof in the assessment district in which said property is permanently located. All rolling stock of all railroads, worked by steam, employed in operating and running over lines of railroads situated and lying in this State, except rolling stock of railroads exempt from taxation by irrevocable contracts with the State, shall be considered as personal property and as such for the purpose of county and city taxation shall be valued, assessed and taxed to the said railroads owning, hiring, using or leasing the same as other personal property is valued, assessed and taxed under the provisions of this act; and for the purposes of such valuation, assessment and taxation, the situs of said rolling stock shall be taken and considered to be in the assessment district in which is located the principal place of business of such railroad companies located in this State, unless it shall appear that the situs of such rolling stock is in some other city or county of this State than that which the principal place of business of said railroad is located in this State. Provided, that wherever the said railroads owning, hiring or

leasing said rolling stock shall extend beyond the limits of this State within any other State or States, the assessors or other tax officers, whose duty it shall be to assess said rolling stock under the provisions of this section shall observe the following rule in ascertaining the assessable value of said rolling stock; that is to say the value of said rolling stock for the purposes of taxation shall bear the same proportion to the total value of said rolling stock which the mileage of said railroad in Maryland bears to its total mileage. This proviso is not to apply to such rolling stock as is permanently located under the limits of this State. All shares or shares of stock in any National bank, or in any bank, corporation, association or company incorporated under the laws of this State and belonging to any non-resident owner, and all other personal property located in this State belonging to any non-resident owner shall be valued and assessed to the owner thereof in the assessment district in which said bank, corporation, association or company may have its principal place of business in this State, or in which said personal property may be located; all personal property belonging to a resident of this State shall be valued and assessed to the owner thereof in the assessment district in which said owner may reside, except goods and chattels permanently located in any city or county of this State, which shall be valued and assessed in the city or county in which they are so located; in valuing real estate in any county in this State, except in a city in said county, the assessors shall specify, as far as may be practicable, the name or names of tracts or parcels of land so valued, and the number of acres or quantity of land in each, and the value per acre. They shall separate the improvements upon the respective tracts or parcels of real estate in the said several counties, so by them respectively valued. In valuing any lot or parcel of ground in the city of Baltimore, or in any city in any county, the said assessors shall specify, as nearly as possible, the precise location of each lot or parcel of land, giving as nearly as practicable the number of front feet in each lot or parcel of ground, and the depth of each lot or parcel of ground, and the rate per front

foot at which the same is valued, and they shall value separately the improvements upon each lot or parcel of ground in said city. When any building so valued is located upon any street and designated by a number, such number and the name of such street shall always be given. The valuation and assessment in the twenty-first and twenty-second wards of the city of Baltimore shall be made in conformity with the provisions of section 5 of Article 4 of the Code of Public Local Laws, title "City of Baltimore." In valuing the stock or shares in any bank, company, association or corporation, the number of share or shares of such stock in such bank, company, association or corporation owned by the owner to whom the same are valued shall be stated, together with the respective taxable value of each as supplied by the State Tax Commissioner. In valuing bonds, securities and other investments, the nature of such bonds, securities and other investments shall be briefly stated, with the respective values of each. All bonds, certificates of indebtedness or evidences of debt in whatever form made or issued by any public or private corporation incorporated by this State or any other State, Territory, District or foreign country, or issued by any State, (except the State of Maryland,) Territory, District or foreign country, not exempt from taxation by the laws of this State and owned by residents of Maryland shall be subject to valuation and assessment to the owners thereof in the county or city in which such owners may respectively reside. And they shall be assessed and valued according to the rate of interest therein stipulated to be paid; that is to say, such of said bonds, certificates of indebtedness or evidences of debt as bear an interest of six per centum shall be assessed at par; such as bear an interest of five per centum shall be assessed at eighty-five dollars in the hundred dollars; such as bear interest of four and one-half per centum at eighty dollars in the hundred dollars; and such as bear an interest at three per centum at sixty-four dollars in the hundred dollars; and such as bear an interest at a rate not named in this section shall be assessed and valued at a corresponding reduced value if the rate of

interest be less than six per centum, and at a corresponding increased value if the rate of interest is above six per centum; and such upon which no interest shall be actually paid shall not be valued and assessed for the year upon which no interest is so paid, but shall be assessed and valued for each and every year when interest is paid on the same, according to the provisions of this section.

Exemption Claims.

181. That if any corporation or person be assessed by the said assessors for any property which the said person or corporation may believe to be exempt from taxation, although the same be not exempted therefrom by the provisions of this Act, such person or corporation shall have the right to require the said assessors to note in a separate book which the said respective assessors are hereby directed to provide for their use, in their respective assessment districts, the particular property so claimed to be exempted from taxation and the name of the owner thereof, and to make in said book, a separate valuation of said property to the owner thereof, to the end that the exemption so claimed may thereafter be separately determined by the proper Boards of Control and Review, or by the law of the land.

In Cases of Disagreement.

182. That it shall be the duty of the assessors appointed under this act for any assessment district, or a majority of them, to be present at the valuation of each and every variety of property, directed by this act to be valued in their assessment districts, except in such counties where there are two assessors at large, and also one for each election district, in which case it shall be the duty of said two assessors at large and the election district assessor while assessing the property in such election district, or a majority of them, to be present at the valuation of each and every variety of property directed by this act to be valued in said election district; and in case the said assessors shall disagree as to any valuation, such valuation shall be fixed and determined by a majority of said

assessors; and if the majority of said assessors should disagree as to said valuation, it shall be the duty of the said assessors to report the matter in difference to the Board of Control and Review within the jurisdiction of which said difference of opinion arose, and the said Board of Control and Review shall proceed to value the said property to the owner thereof, and the said valuation as by it made shall have the same effect as if the same had been made by the said assessors.

Pains and Penalties.

183. That if any person or owner of property so required to return any of the schedules as aforesaid shall wilfully neglect so to do within the time fixed by this act, such person or owner shall forfeit a sum not less than fifty dollars nor more than five hundred dollars, to be recovered by suit in the name of the State of Maryland against such person or owner in the Circuit Court for that county or in that court in the city of Baltimore which shall have jurisdiction over the said case, and upon refusal or neglect as aforesaid of any person or owner as aforesaid or of any agent as aforesaid, to make such returns, the said assessors "appointed under this act, and in the year eighteen hundred and ninety-six and every fourth year thereafter, the respective Boards of County Commissioners of the several counties of this State in which said person may reside or said property be permanently located, and the Appeal Tax Court of Baltimore City, if the said person shall reside in said city, or said property be permanently located therein," shall, upon their own knowledge and upon the best information they can obtain, value the property of such owner or person to the utmost sum they may believe the same to be worth in cash.

184. That any owner of property or person who shall give a false or partial account or statement of any property owned by him, her or it, or under his, her or its management, or in his, her or its possession, with intent that the just valuation, assessment or taxation of such property may be avoided, shall forfeit and pay twice the amount of taxes for the year following which would have been due upon such property if the

same had been duly returned and valued, and said sum shall be recovered by an action brought in the name of the State of Maryland, against such person or owner, in the Circuit Court of that county, or in that court of the city of Baltimore which shall have jurisdiction in said case, and in the trial of such cause the jury shall have the right to find from the evidence the amount of taxes which would have been due upon said property if the same had been duly returned and valued as aforesaid.

Returns to be Made.

185. That the said respective assessors appointed under this Act for each assessment district shall, as soon as the valuation directed by this Act to be by them respectively made and completed, make a return, verified by the oath or affirmation of said respective assessors for such assessment district, or by the oath or affirmation of a majority of them, which shall set forth the names of the owners in each election district or ward within their respective assessment districts to whom property has been valued under this Act. If the name of any owner is unknown, the property shall be returned as belonging to a person unknown. After the name of each owner, as aforesaid, shall be set down the property valued to said owner, described as directed for the 178th section of this Act, and the value thereof as valued shall be duly extended opposite to each item of said property; the said assessors, as soon as they shall have completed their work of assessment, shall deliver their returns to the County Commissioners of their respective counties, who shall immediately notify the several Boards of Control and Review that such returns have been made, and summon them to assemble for the performance of their duties, and upon assembling of said Boards of Control and Review shall deliver said returns to them. The assessors appointed for any assessment district in the city of Baltimore shall notify the Appeal Tax Court that they have completed the assessment, and shall deliver said returns and books to the Board of Control and Review of the district within the city of Baltimore within which their said assessment districts are situated;

the said respective assessors shall, at the same time, return to the said respective Boards of Control and Review within which their respective assessment districts are situated, details of their respective proceedings in the execution of this Act, and all lists and statements received by them relating to the respective properties which have been by them valued, and the valuation whereof have been by them returned to said respective Boards of Control and Review.

186. That the several said returns directed to be made by the preceding section of this act to the said respective County Commissioners, and to the said respective Boards of Control and Review, shall be made by assessors in person or by messenger on the second Thursday in September, eighteen hundred and ninety-two; but the Governor of this State shall have the power, for good cause shown, to extend the time so provided for making such returns to such time prior to the second Tuesday of November, eighteen hundred and ninety-two, as may by him be deemed right and proper.

187. That it shall be the duty of the several Boards of Control and Review appointed under the provisions of this act to give two weeks' notice by publication prior to the second Tuesday in September, eighteen hundred and ninety-two, or such later day as the Governor may name, in case he shall extend the time for making of such returns, in one or more newspapers published in their respective counties, and in the city of Baltimore, and of different political views, if published in more than one paper and such different political papers are published in the respective county or counties, of the respective meetings to be held by them on the second Tuesday of September, eighteen hundred and ninety-two, and if there be no newspaper published in the county for which any Board of Control and Review is appointed, such notice shall be given by notice set up at the court house door in said county and at other public places in said county; each of said boards shall assemble on the second Tuesday in September, eighteen hundred and ninety-two, or in case the time for completing the assessment shall have been extended by the Governor, as pro-

vided by section 186, then upon the day on which by his discretion said assessments must be returned, or upon the day upon which the County Commissioners shall notify said Board of Control and Review to assemble, and shall continue in session daily thereafter, except on Sunday, from nine o'clock A. M. until four o'clock P. M., except, however, that the Board of Control and Review of Queen Anne's, Worcester, Wicomico, Talbot, St. Mary's, Allegany and Somerset counties shall sit on Tuesdays and Wednesdays of each week during their term, and no more, and shall on each of said days remain in session not less than six hours, and shall receive pay only for the days on which they shall actually be in session; each of the said boards shall proceed to consider the returns to them respectively made by the assessors from the respective assessment districts within their respective jurisdiction, and by the County Commissioners and Appeal Tax Court of Baltimore City, and to hear and determine complaints and appeals of any person or owner who may deem himself or itself aggrieved by any valuation of property made by said assessors; in every Board of Control and Review appointed under this act two of the three members of said board shall constitute a quorum and be competent to perform all duties and exercise all the powers of the said board; each of said boards shall inform persons or owners resident within their respective jurisdiction who may apply to them as to the property valued within such jurisdiction to such respective persons and owners, and as to the amount at which said property has been so valued; and each of said boards shall have power and authority to examine upon oath or affirmation the said person or persons making any complaint of or appeal from any valuation returned to said board touching the particular value of property so valued, or touching any other property belonging to said person or owner, whether the same has been valued or not, and may upon due examination or upon their own knowledge abate or increase the valuation or valuations complained of or appealed from, and correct the valuation or valuations so made in said returns; each of said boards may value

to the owners thereof within the proper assessment district or districts, property which has been omitted to be so valued by the assessors of the said proper assessment district, or may value to the owner thereof any property in relation to which the assessors within the jurisdiction of said board have disagreed as to the value thereof; each of said boards is hereby directed and required to examine carefully the several certificates, statements and returns of valuation of property claimed to be exempted from valuation and assessment made by the assessor within their respective jurisdiction, and to correct the said returns of assessable property made to them as aforesaid, carefully, by striking therefrom all property which ought not to be valued under the provisions of this Act; and by adding thereto, and valuing at its proper value, all the property omitted in said returns which ought to have been included therein, and which may be subject to the valuation under the provisions of this Act; each of said Boards of Control and Review shall have power to correct any valuation so returned to them respectively, whether any complaint or appeal has been made in relation thereto or not; each Board of Control and Review as aforesaid while engaged in the performance of its duty shall have power to call the several assessors, or any of them by whom any returns were made, before it at any time, in order that the said returns so to be made by the said several assessors may be to it fully explained. And it is further provided, that if the several returns directed to be made by the respective assessors shall not be ready by the second Tuesday in September, the said Board of Control and Review shall not assemble until duly notified and summoned by the said County Commissioners, respectively, and it shall be the duty of the said County Commissioners to summon them to assemble so soon after the said second Tuesday of September as the said returns shall be delivered to them by the assessors.

Records to be Kept.

188. That each Board of Control and Review appointed under this act shall, with the aid of their respective clerks, enter and record in a book or books to be provided for that

purpose, an accurate and fair account of all the property within their respective counties, or within their respective assessment districts of the city of Baltimore heretofore referred to in this act which has been valued as hereinbefore provided. The said record shall show the name of owner of property in each election district of each county as now laid out, and in each ward in the city of Baltimore, as laid out, set down in alphabetical order, except in Baltimore city, where they shall be set down in the order in which they were assessed, with an alphabetical index; if the name of any owner is unknown the property valued to such person shall be valued as belonging to a person unknown; after the name of each owner so set down as aforesaid, the property valued to such owner described as directed by the 178th section of this act shall be set down, and the value thereof, as valued, shall be duly extended opposite to each item of the said property; each of said Boards shall, with the aid of their respective clerks, make a full and complete alphabetical index of the names of all persons or owners to whom property is valued in their respective counties and in the first four wards of Baltimore city as laid out; and in the fifth, sixth, seventh and eighth wards of Baltimore city as laid out; and in the ninth, tenth, eleventh and twelfth wards of Baltimore city as laid out; and in the thirteenth, fourteenth, nineteenth and twentieth wards of Baltimore city as laid out; and in the fifteenth, sixteenth, seventeenth and eighteenth wards of Baltimore city as laid out; and in the twenty-first and twenty-second wards of Baltimore city as laid out; and shall return the said books and lists so prepared to the County Commissioners of their respective counties and to the Appeal Tax Court of Baltimore city, according as the said books may relate to persons or property in said respective counties or in Baltimore city. The said several books and indices shall be returned as aforesaid to the respective County Commissioners of the respective counties in this State and to the Appeal Tax Court of Baltimore City, not later than sixty days after they shall have begun their work of reviewing the returns of said assessors in the several counties, and on or before the thirty-first day of December, in Baltimore city, unless the Governor of

this State, for good cause shown to him, shall extend the time of making any one or more of said returns, as he is hereby empowered to do.

Quadrennial Listing.

189. That it shall be the duty of the respective Boards of County Commissioners for the several counties of this State, and of the Appeal Tax Court of Baltimore City, between the first day of January and the fifteenth day of April in the year eighteen hundred and ninety-six, and between the same days in every fourth year thereafter, to carefully examine all the schedules required by section one hundred and seventy-nine of this act to be returned to them, and to make such alterations and additions from time to time in the books required to be returned to them by the assessors of their respective counties or the city of Baltimore by section one hundred and eighty of this act, as they may from said schedules or any of them ascertain to have been made in or to the assessable personal property of any person or persons furnishing said schedule or schedules, but no property shall be by any of the respective Boards of County Commissioners, or by the Appeal Tax Court of Baltimore City, stricken from the assessment list as taxable basis of any person or persons so furnishing the said schedule or schedules by reason alone of this fact, that such property is not contained in such schedule or any of them.

190. That any owner of property, or owner to whom property has been valued, and who shall claim that the property, so to him or it valued, is not owned by him, or is exempted from valuation and assessment, or any person acting in behalf of such person, or making such claim on behalf of said owner, may file a petition in the Circuit Court for that county in which the said property has been so valued, or in the City Court of Baltimore, if the said property has been valued in Baltimore city, setting forth the facts of the said case and the ground upon which said exemption is claimed, or denying said ownership; the said petition shall be filed within thirty days after the return made by the Board of Control and Review of

the county, or the city of Baltimore, in which said property shall have been valued, to the County Commissioners of said county, or to the Appeal Tax Court of Baltimore city, or within thirty days after the said property has been so valued to the said owner, and notice given to him of such valuation; to said petition the County Commissioners of the counties, or the Appeal Tax Court of Baltimore city, according to the locality in which said valuation was made, shall be made defendants, and the State's Attorney of the said county, or the State's Attorney of Baltimore city, as the case may require, shall appear for the said defendants; the said defendants shall answer the said petition within ten days after they shall have actual notice thereof. It shall be the duty of the said Circuit Court, or City Court of Baltimore, to hear the said case upon petition and answer, and upon such affidavits, if any, as the court may authorize to be taken by either party, on such notice as the court may prescribe at its then session, or at the earliest practicable day thereafter; and the said Court shall determine whether the said property, so valued to the said owner, is or is not subject to such valuation and assessment for State taxes, or ought or ought not to be valued to said owners, if the said Court shall determine that the said property is not subject to such valuation and assessment, or ought not to be so valued to said owner, it shall, by its order, direct the said County Commissioners or the said Appeal Tax Court, as the case may be, to strike the said property from the list of property valued to such owner; but if it shall determine that the said property is subject to valuation and assessment, or valuation to said owner, it shall so determine by its order.

191. That if it appears by the returns made as aforesaid to the County Commissioners of any county, or to the Appeal Tax Court of Baltimore city, that any property not exempted from valuation and assessment under this act has not been valued to any owner in the county or city in which the same ought to be so valued, it shall be the duty of the State Tax Commissioner to direct the said property to be so valued by the County Commissioners of the proper county or by the

Appeal Tax Court of Baltimore city, and to direct that notice of said valuation shall be given to said owner. If the County Commissioners of any county or the Appeal Tax Court of Baltimore city, shall refuse to value such property to the owner thereof, it shall be the duty of the State Tax Commissioner to file a petition in the name of the State of Maryland against the County Commissioners, or the Appeal Tax Court, as the case may be, so refusing, in the Circuit Court of that county in which such valuation ought to have been made, or in the City Court of Baltimore, if said valuation ought to have been made in said city. And the State's Attorney of the proper county or city shall appear for the said State, and the said County Commissioners or Appeal Tax Court shall answer the said petition within ten days after they shall have actual notice thereof. It shall be the duty of the said Circuit Court or City Court of Baltimore, to hear the said case upon petition and answer, and upon such affidavits, if any, as the Court may authorize to be taken by either party, on such notice as the Court may prescribe at its then session, or at the earliest practicable day thereafter, and the said Court shall determine whether the said property ought, or not, to be valued to the said owner. If the said Court shall determine that the said property ought not to be valued to said owner, it shall so direct by its order; but if it shall be determined that the said property is subject to valuation and assessment, it shall direct the same to be valued to the owner thereof in the assessment district in which the same ought to be so valued.

192. That either party to the proceedings mentioned in the two preceding sections may appeal from the order of the court therein to the Court of Appeals, and on such appeal the clerk of the court shall forthwith transmit the original papers, including the order of the court, to the Court of Appeals, and the said court shall immediately hear and determine the said case.

General Supervision.

193. That it shall be the duty of the State Tax Commissioner to supervise the conduct and proceedings of the asses-

sors, members of the Board of Control and Review, and clerks appointed under this act, to report to the Governor all instances of neglect or dereliction of duty on the part of any of such officers which may be brought to his attention, and to use his best efforts to promote the prompt and effective execution of the provisions of this act.

194. That if any assessor, member of the Board of Control and Review, or clerk appointed under this act, shall wilfully neglect to perform the duties of his said office, or shall corruptly receive any fee, reward, emolument or advantage whatsoever to him given or extended, to influence his conduct or the performance of his duty under this act as assessor, member of the Board of Control and Review, or clerk, he shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be subject to a fine of not less than five hundred dollars and not more than one thousand dollars, and may also, in the discretion of the court, be imprisoned for a period of time not exceeding six months.

Books and Stationery.

195. That the books, blanks and stationery and necessary clerical labor which the State Tax Commissioner may require to be provided for the due execution of this act shall be provided by the State Tax Commissioner, and the said books, blanks, and schedules shall be so made, prepared and ruled as to show separately the different values of personal property, real property and bonds, stocks and other private securities in the basis of taxation, and the State Tax Commissioner is specially charged with the enforcement of this requirement; and the cost thereof shall be paid by the Treasurer of the State, on the warrant of the Comptroller, and a sum sufficient therefor is hereby appropriated out of any moneys in the treasury not otherwise appropriated; provided, that the said sum hereby appropriated shall not exceed seven thousand, five hundred dollars.

196. That it shall be the duty of the County Commissioners of the several counties of this State, and of the Appeal Tax Court of Baltimore city, as soon as possible after the several

returns hereinbefore provided for, or to them, respectively, made by the respective Boards of Control and Review, hereinbefore referred to, to prepare condensed statements, exhibiting under appropriate heads the amount of the valuations of property in their respective counties and in the city of Baltimore, and to deliver said statements to the State Tax Commissioner of this State; and it shall be the duty of the said Tax Commissioner to collate the statements so returned to him, under appropriate heads, and to make report thereof to the General Assembly at its next session, to the end that the said General Assembly may be fully informed as to the amount of assessable property in each county in this State and in the city of Baltimore.

Eligibility.

197. That no person shall be eligible to appointment by the Governor for the position of assessor or one of the Board of Control and Review or clerk under the provisions of this act who, at the time of said appointment, shall hold or perform the duties of any Federal, State, county or municipal office of profit or trust within this State.

Sec. 3. And be it enacted, That all acts or parts of acts inconsistent with this act are hereby repealed.

Sec. 4. And be it further enacted, That this act shall take effect from the date of its passage, provided that this act shall not apply to the assessment and collection of State, county and city taxes levied for the year 1892.

The supplementary bill was as follows:

An Act to repeal section three of article eighty-one of the Code of Public General Laws, title "Revenue and Taxes," sub-title "Valuation and Assessment," and to re-enact the same with amendments, and to repeal all laws and parts of laws inconsistent therewith.

SECTION 1. Be it enacted by the General Assembly of Maryland, That section 3 of article 81 of the Code of Public General Laws, title "Revenue and Taxes," sub-title, "Valuation

and Assessment," be and the same is hereby repealed and re-enacted so as to read as follows:

3. All bonds, certificates of indebtedness or evidences of debt in whatsoever form, made or issued by any public or private corporation, incorporated by this State or any other State, Territory, district or foreign country, or issued by any State, (except the State of Maryland,) Territory, district or foreign country, not exempted from taxation by the laws of this State, and owned by residents of Maryland, shall be subject to valuation and assessment to the owners thereof in the county or city in which such owners may respectively reside, and they shall be assessed and valued according to the rate of interest therein stipulated to be paid; that is to say, such of said bonds, certificates of indebtedness or evidences of debt as bear an interest of six per centum shall be assessed at sixty per centum of their face value; such as bear an interest of five per centum shall be assessed at fifty dollars in the hundred dollars; such as bear an interest of four and one-half per centum at forty-five dollars in the hundred dollars; such as bear an interest of four per centum at forty dollars in the hundred dollars; such as bear an interest of three and one-half per centum at thirty-five dollars in the hundred dollars; and such as bear an interest of three per centum at thirty dollars in the hundred; and such as bear an interest at a rate not named in this section shall be assessed and valued at a corresponding reduced value if the rate of interest be less than six per centum, and at a corresponding increased value if the rate of interest is above six per centum, and such upon which no interest shall be actually paid, shall not be valued and assessed at all. And all assessors or other tax officials, whose duty it shall be by law to make or revise assessments or valuations of such securities as hereinbefore described shall make such assessment or revision in accordance with the provisions of this act, any law to the contrary notwithstanding.

Sec. 2. And be it further enacted, That this act shall take effect from its passage, and all acts and parts of acts inconsistent herewith be, and the same are hereby repealed.

PUBLIC ROADS.

The Ten-Block System.

There have been no changes in the public road systems in operation in Maryland, since the publication of my first report, sufficient to warrant any such extended treatment of the subject as it received at that time. In view, however, of the fact that road reform is still prominent in the public mind, and that strong efforts will be made looking toward greatly needed changes at the coming session of the General Assembly, anything new bearing upon this matter becomes doubly interesting.

In the following pages is set forth an explanation of a new system of numbering farms and roads. It has been called the "Ten-Block System" for the reason that each mile of road contains ten blocks, the numbers in each block being arranged very much upon the same principle as the numbering of houses by the decimal system in Baltimore, Washington and some other large cities.

The introduction of the system in this State would greatly facilitate the location of farms and enable one to tell after a short and simple calculation precisely the distance required to be traveled in reaching a given point. Any one who has had occasion to make inquiries for houses or places along a country road will easily appreciate the great advantages to be derived from such a system.

The Ten-Block system was originated by Mr. A. L. Bancroft, of Contra Costa county, California, and is now in successful operation there. The explanation given is very thorough, including the ordinance passed by the Board of Supervisors of Contra Costa county, the detailed working of the system there, suggestions for its extension to the mail, together with a map of a section of road in Baltimore county for the purpose of giving it a local application.

Now for the system itself. The roads are first named; not a different one for every town that is passed, but in as long lengths as practicable. Half a dozen different names might be given to the highway for instance, but a single one is much better. In selecting names for roads the name of either termini is not chosen, because while going towards a town a road bearing the name of the town might be appropriate, when going in the opposite direction it would not be so. Then a town might have several roads leading into it, and this plan would also cut up the roads by one name into short lengths. It has been found that this idea is the first to be advocated by many country people, but a little thought will show that in order to make any real progress we must get completely away from it. The roads are not named for any living resident or old settler upon it. While this might be pleasing to the one old settler whose name was selected, it very likely would not be to any one else, and jealousy and dissatisfaction would ensue. The possessive case is avoided in road names. It is not likely to be carefully and correctly written and does not look well. The names should be selected from some landscape feature, some historical association, Indian names, historical characters, etc. Only those are taken which are easy to spell and to pronounce, and which would be unobjectionable to all.

The arrangement of the roads in the list is commencing at the north, they go to the east, south, west and back again to the north. By keeping this in mind one will know where to look for the name desired.

The roads, and numbers upon them commence at the county seat or at the end nearest to it.

They are measured and blocked off, ten imaginary blocks to the mile. These blocks have only frontage; not depth nor thickness. This makes the length of each block 528 feet, 176 yards, 32 rods, or 8 chains.

Two numbers are assigned to each block; the odd ones upon the left and the even ones upon the right. It makes no differ-

ence whether the block has an entrance upon it or not, the number is assigned just the same, and it is always available should a building be erected. Each house has the number of the block upon which the entrance is located. The second and all succeeding houses have the same number but followed by a distinguishing letter, 426, 426a, 426b, etc.

The numbers indicate distances from the commencement of the road which can be very quickly ascertained by a short mental calculation, and any school child who understands decimal fractions will have no difficulty in doing so. As there are two numbers to each block, divide the house numbers by two, which will give the number of blocks from the starting point. As there are ten blocks to the mile, divide this result by ten, or point off one decimal and the distance in miles and tenths is shown. There being two numbers to each block, if a house number is odd, one should be added to it in order to complete the block before calculating the distance. For instance house No. 685 is the same distance from the starting point as 686 just opposite, so to calculate the distance of 685 add one making it 686; divide by two, or half it, making 343; divide again by ten or point off one figure and we have 34.3—that is in common fractions $34\frac{3}{10}$ miles from the beginning of the road. A little practice will enable any one to make this calculation very quickly and easily.

When the fences are in good condition and are suitable, a line will be placed showing the division between the blocks, with the block number upon each side of it. As you face the numbers from the road, those upon the left would read for instance, 127—129, and upon turning to the right they would read 130—128. This brings 128 opposite 127 and 130 opposite 129.

At the end of each complete mile, where practicable, as a reminder, the same as a mile-stone, a complete circle will be placed. Make one on a peice of paper and see how it looks. Inside of the circle will be a cross like a letter X laid on its side. Make the X in the circle. At the half miles a half

circle with half of the X will be made. The X will indicate the ten blocks and when it is divided and but half of it taken it becomes a V and indicates half of the ten or five blocks; half a mile. Draw a line through the complete circle, dividing it and the X, and see how it looks now. By having the full circle blue and the half circle red will enable a glance to distinguish them. For the school child or the adult to travel a road so blocked off, will be like traveling with a tape line stretched along by the side of it. A glance will show you just your location.

This system, besides being very useful to day, is as permanent as the roads themselves. The settlement of the country or the growth of towns along the roads does not interfere with it in the least. At the County Seat, the exact point of commencement of the measuring of all the roads touching the town, is the middle of the street directly in front of the main entrance to the court house. The most direct route to and out the road to be measured is followed from this point. Within the town the town streets and town house numbers govern. When the town limits and streets are passed and the country road reached, the country house numbers govern. The first one used depends upon the distance it may be from the court house, the starting point of measurement, and they continue regularly from that point. When a road enters a town the town streets and numbers govern until its limits are passed again, when the country road name and house numbers are resumed, the numbers always depending upon their distance from the starting point. In this way a road may pass through half a dozen towns and the numbers on each side of the towns always indicate the true position of the house and the distance from the commencement of the road.

Advantages of the System.

If the mistake had been made of commencing the measurement from the town limits it would have been fatal to the permanency of the system. Towns are constantly growing and the boundaries are constantly changing, and all would

soon have been confusion. Now the county seat, or any or all of the towns through which the road passes, may grow, and by their growth the country house simply becomes a town house, but the first country houses reached and all the remaining houses retain their original numbers, and they are just as applicable as they were at the outset.

While for many reasons the postoffice at the county seat would be desirable as a starting point of the county road measurement, it was found upon the whole undesirable. The United States government own but very few of its postoffice buildings, and the offices are likely to be moved from one building to another, consequently, while the starting point would remain, its appropriateness soon vanishes. On the other hand, the road system is or should be a county affair; the court house, where the county offices are located, is invariably owned by the county and is permanently located, which makes a good and sufficient reason for selecting it as the central point.

Each road, when the system is in operation over the entire county, will be described as commencing at a given number of a certain road, and the official records on file at the county clerk's office will show the distance to the edge of the block each way from the point where the road branches off. Thus the distances, not merely along one continuous road, can be quickly calculated, but they can be quickly made along road after road through the entire length of the county in any direction.

The road measurements are made along the surface of the traveled roadway, and do not follow section lines or the distance upon the level as is done in land surveying. Thus the distance necessary to be traveled in order to reach a given point is shown.

While the number of a block and consequently of the number of a house never changes, the distinguishing letter within the block may under some circumstances require changing. This would be only when the first house built in a block

was located near the farther end of the block and afterwards a second house be built in the same block and located before, or nearer the commencement of the block than the first house built, the house nearest the commencement of the block, although it may be the last one erected, would be entitled to the block number without a letter, while the original house would retain its number, but add the distinguishing letter.

The numerous and great advantages of this system can be briefly summarized as follows: All new dwellings upon a road can have the correct numbers applied to them at any time to any extent, without in any way interfering with those of the existing houses. As numbers are assigned to the blocks it matters not whether they are occupied or not. The plan works equally well whether the houses are miles apart or are as near together as twenty feet, making more than 250 on each side of the road within the mile. Distances can be quickly and accurately calculated from any house number to any other house number within the county, and with the aid of a key which would take up no more room in the pocket than a large letter envelope, or being familiar with the information which the key would give, the distance could be calculated in one minute or less, no matter in what parts of the county the two numbers might be located. The homes of residents can be found readily and without hesitation or loss of time. Strangers can be quickly and clearly directed how they can find the residence desired. The mileage of constables, jurymen and other officials can be accurately calculated. Road work can be accurately defined by stating the number of the block in which located. With this system established, a directory of the town and county residents upon the same basis as a city directory becomes feasible, or the address of the voters may be given in the great register of the county, which would be useful to a limited extent. A county road register, in which can be recorded all ordinances or orders of the board of supervisors relating to the several roads by name, can be kept. This last feature will be worth all that the establishing of the system will cost the county.

In the work of establishing the system it should be well done; all could then feel a pride in it, and the children also should be taught to have the feeling of pride for it and, that because their fathers helped pay for it, an ownership in it, and be as ready to fight to protect the guide boards and house numbers as they would should any ruffian attempt to deface their own front gate or their home itself. They should be taught not to make a target of the guide boards or house numbers for their stones, sticks, mud balls or guns, and to feel that it is their duty, right and pride to prevent others from doing the same thing where possible.

Copy of the Ordinance.

The following is a copy of the ordinance adopted by the Board of Supervisors of the County of Contra Costa, California, establishing the system, and is republished so that those interested in the subject may take advantage of the suggestions therein contained:

An Ordinance of the Board of Supervisors of the County of Contra Costa, State of California: Naming the several public highways of the county, and authorizing the use of certain other names and designations for private or local roads in use in said county; also providing for the erection and due preservation of suitable guide boards at all road crossings and intersections, and at other necessary or suitable points, upon such roads as have been properly measured and divided into blocks, according to the "Ten-block System;" also providing for the affixing and maintaining by residents, of house or farm entrance numbers, based thereon for all country residences upon such measured roads; also providing for an official road map of the county and other records.

The Board of Supervisors of the County of Contra Costa do ordain as follows:

SECTION 1. All public highways which have been duly accepted by the county, shall hereafter be known and designated by the names prescribed in this ordinance, according to the designations and descriptions laid down in section 29.

Sec. 2. All private or local roads designated in section 29 of this ordinance, shall in all official reference thereto, be hereafter known by the names herein prescribed; and the public use and recognition of such designations is hereby recommended.

Sec. 3. Whenever the owner or owners of any strip or strips of land within the county shall represent to the Board of Supervisors their purpose and wish to devote the same to use as a public or private road, or as a right of way for access to any dwelling, and shall offer or accept a name for the same approved by the road committee to be appointed or confirmed by the Board of Supervisors and shall comply with the provisions of the law respecting roads, such road name shall, when approved by the Board of Supervisors, be thereafter used in all official reference to the same, and its public use shall be recommended. Such road shall then be listed in the road list, and given a designating number and letter, immediately following the number of the road to which it is adjacent or tributary, until such time as the Board of Supervisors shall revise the list and re-number the roads. And such road shall thereafter come under the provisions of this ordinance the same as the roads herein enumerated.

Sec. 4. The streets of all unincorporated towns or villages in the county may come within the provisions of this ordinance and be named. When numbered, the numbers to be according to the town method of 100 numbers, to the actual block or square.

Sec. 5. The authorities of the village, town or city incorporations in the county are recommended and urged to name the streets within their corporate limits, and to cause the houses thereon to be numbered; also to make use of one of the following designations only for the roadways within such incorporation, viz: Alley, Avenue, Boulevard, Court, Park, Place, Plaza, Promenade, Row, Square, Street, Terrace.

Sec. 6. Road measuring and numbering as contemplated by this ordinance are hereby defined and described as follows:

All roads shall be measured along the surface line of the same, as near to the middle of the roadway as practicable, and laid off in imaginary blocks one-tenth of a mile, or 528 feet frontage each, according to the "Ten-block system of numbering country houses."

A line to indicate the division between these blocks, with the block number on either side of the same shall be marked

or painted upon the fence where practicable, (and where it exists in a fair state of preservation), or upon any other permanent object on one or both sides of the road.

The odd numbers shall be applied to the blocks on the left hand side of the road, and the even numbers to the right hand side. The block numbers shall be in figures not less than two inches nor more than two and one-half inches in height (where the fence board or other object will admit of this size) and so plainly painted as to be easily read from the centre of the road. The mile distances shall be distinguished in some suitable manner, as by a full circle, and the half mile by a half circle or other suitable device.

Sec. 7. The initial point of measuring for roads leading from the county seat shall be the centre of the street immediately in front of the main entrance to the court house at Martinez. Other roads shall be measured commencing at the end nearest the county seat, and branch roads the same, or from the main road to which they are tributary.

Sec. 8. Note shall also be taken and a record kept of the block within which is located, and the number of feet in or within the block, (i. e. the distance from the commencement of the block) of all bridges, large culverts, important permanent springs, drinking troughs, public monuments, summits, road crossings and intersections, and objects of special prominence, and the correct block number be marked thereon, or near thereto where practicable.

Sec. 9. Note shall also be made and a record kept of the number of the block within which is located, and a number of feet in or within the block of each and every house entrance or gateway, lane or road leading from the highway to any residence upon the roads, or to which access is had by way of the road with the name or names of the owner or occupant when practicable to procure them; also to the entrance to all school houses, churches, and public buildings.

Sec. 10. The measurement of all roads which pass through or enter the corporate limits of cities or towns shall be continuous, regardless of such boundaries, but the block and country house numbers may be omitted within such corporations.

Sec. 11. In the measurement of the roads of the county required by this ordinance, a record shall be made and preserved of the general course of bearings by the compass of all roads at road crossings or intersections. Also the general

course of all private or local roads at their point of departure from the main road. And it shall be the duty of the County Surveyor to prepare and place on file in the office of the clerk of the county, a complete road map of the county, with the names of all roads, and whenever the same are measured, the block numbers at their commencement, at all road crossings and at all crossings and connections of all roads and at their endings, together with the boundaries of the several road districts in the county.

Sec. 12. The measurement of the roads of the county may include the record of the accurate reading by barometer of the altitudes or elevations above the sea level of the commencement and ending of all roads, all plains, valleys, the foot and summit of hills and the slopes of mountains at suitable distances. The records of such altitudes if taken, to be placed over the block number nearest the point of observation or otherwise suitably posted to show the range of important elevations traversed.

Sec. 13. Whenever one or more residents or owners upon any road enumerated in section 29 or hereafter designated and described as required by this ordinance, or other person, shall furnish the Board of Supervisors satisfactory evidence that the provisions of this ordinance respecting road measuring and numbering have been faithfully complied with upon any road touching the county seat or upon any road connecting with any other road which has been previously measured and blocked off, and whenever such residents shall file with the county clerk the record required in sections 8, 9 and 11, and whenever such resident, residents or other persons shall have affixed block numbers at the beginning and ending of such road and at each mile and half mile division thereof, where practicable, or oftener, then and in that case it shall be the duty of the Board of Supervisors to erect upon such road or roads, guide boards as hereinafter prescribed.

Sec. 14. Whenever any such road is so measured and block numbers designated thereon, thenceforth and thereafter the several requirements of this ordinance as to the maintenance of house numbers, the protection and preservation of guide boards, etc., shall become applicable and in force along or upon such road or roads, and the penalties herein prescribed shall be duly enforced.

Sec. 15. The guide boards when ordered upon any road or roads shall be erected and permanently maintained at the fol-

lowing named points and at such places as the Board of Supervisors may hereafter prescribe: At or near the commencement of all roads or branch roads, at all road crossings or intersections, at all ferry landings, at all railroad stations, and at all road crossings of the county boundary. They shall be so placed on the principal roads as to face the traveler when moving from the county seat.

Sec. 16. Such guide boards shall be of iron, not less than No. 16 in thickness, galvanized and painted. They shall be bent at right angles to fit the post, and with two arms or boards for the lettering. The outer edges shall be bent back from the face one-half inch in width, the lower portion being cut away the width of the post, and the upper lip to rest on the top of the post, to which the board must be securely attached by a sufficient number of screws. The posts shall be of sound redwood, 6x6 inches, and twelve feet long, to be set three feet in the ground, with cross pieces nailed to the post in light soils; the top and the portion below the ground to be dipped in or painted with coal tar or some other wood preservative; the portion above the ground to be painted with two coats of good metallic or other suitable paint. The exposed surface of the boards shall be 15x24 inches in size each, except at the entrance to local roads, which may have but a single projecting arm 6x15 inches in size, and affixed to a 4x4-inch post, in all other particulars to be of similar construction to the larger size; the wording and lettering to conform to the general plan indicated by the design accompanying this ordinance, and made a part thereof. All of the lettering upon the guide boards, except the second line, which is in letters smaller than the others, and a section of eighteen inches of the two faces of the guide post directly under the guide board, shall be painted with luminous paint.

Sec. 17. Upon all guide posts the following notice shall be conspicuously painted or stencilled:

A PENALTY
FOR
DEFACING
OR
POSTING.

Sec. 18. Whenever the provisions of section 13 have been complied with, as to any road or roads, and guide boards have been erected, the supervisors shall also cause a printed notice to be served upon the occupants of every residence upon such road or roads, outside the limits of incorporated towns, left at

such residence, or where the residence is distant a mile or more from the public or named road, mailed to their address, accompanied by a copy of this ordinance, or abstract thereof. Such notice shall also be delivered or mailed to one of the officers of each school district and church, of which the building is located upon said measured road. These notices shall have a blank form, to be properly filled with the exact location and correct number of the entrance to the house, with instructions as to the house number to be posted and maintained.

Sec. 19. Every householder upon such measured road residing outside the limits of incorporated towns, shall within thirty days after the service of the notice required in section 18, post and thereafter permanently maintain in legible condition upon the road or at the entrance or right of way from the road, the correct house number of his residence, as given in said notice. It shall be placed in such a conspicuous position as to be easily seen and read from the centre or opposite side of the road. The figures shall be well proportioned and of a size not less than three inches in height, nor more than four inches, except in town or village settlements, where the numbers may be one inch less in height and may be maintained upon the doorway or at the gate. The numbers must be neatly made, in the style and manner that a professional sign-writer would use.

Sec. 20. Any owner or occupant of any dwelling in the county which is reached by a private road or right of way is hereby permitted to post and maintain his house number upon the public highway at the entrance to such private road, or right of way, or upon such private road or right of way, and he or she may place therewith his or her own name and business, provided such sign is made in a neat and tasteful manner and conforms to the provisions of this ordinance.

Sec. 21. Whenever the occupant of any dwelling upon a measured and numbered road, shall fail, for the term of thirty days to maintain the proper house number at the entrance thereto, and having been notified by the road officer to comply with the law, shall fail to do so, he shall be deemed guilty of a misdemeanor.

Sec. 22. Whenever any house, upon a measured and numbered road, now vacant, shall be occupied or any new dwelling house shall be erected upon such road, it shall be the duty of the occupant within 30 days to properly post and thereafter permanently maintain at the entrance thereto, the correct house number of the same as provided in this ordinance, and such

residence shall thereafter come under the provisions of this ordinance the same as dwellings now occupied.

Sec. 23. There shall be prepared for county use, a book of records for the roads of the county in which shall appear arranged in proper order, under the name of each road, an index or digest of all ordinances or other official action relating to that road, making such road record an official history of all the roads of the county.

Sec. 24. A copy of all the field notes of the survey measurements, elevations and other records with the block and house numbers as provided for, shall be carefully preserved in the office of the county clerk and open to the inspection of citizens as are other county records.

Sec. 25. The execution of the work required by this ordinance shall be subject to the inspection and be made to conform to the requirements of a road committee to serve without pay, and to consist of three members, one to be appointed by the Board of Supervisors, one to be named by the Road Naming Committee who have prepared this plan, and the third to be chosen by the two thus appointed, and all to be confirmed by the Board of Supervisors; and any work of measurement, erecting guide posts or affixing numbers shall not be held to be complete until approved by a majority of this committee.

Sec. 26. It shall be the duty of the road officials to thoroughly inspect the roads within their respective districts, and to make report to the Board of Supervisors, at least, as often as at the close of each six months of their terms of office, as to the condition of such roads, and any failure to comply with the provisions of this ordinance, shall be punishable according to the laws of this State. They shall also see that guide boards are preserved in a legible condition, and house numbers properly maintained, notifying residents of any neglect in this respect. It shall be their duty to report any person charged with violating the provisions of this ordinance and to enter complaint against them in such case. They shall also have full authority to arrest any person or persons found defacing or removing block or house numbers or mutilating any guide board, or posting any notice upon the posts or boards, or in any way violating the provisions of this ordinance.

Sec. 27. If any person or persons shall mutilate, deface, destroy or remove any guide board or guide post, any block or house number, any name, sign or advertisement which may be lawfully posted at or upon the entrance to the residence or

dwelling of any person to whom such notice belongs, whether such entrance be public or private or through right of way, or shall mar, deface, or injure by shooting, stoning or otherwise, any guide post or board, or shall fasten or paint or stencil any notice or advertisement to such posts or boards, save such as are required by this ordinance, the person or persons so offending shall be deemed guilty of a misdemeanor, punishable upon due conviction by fine of \$50, one-half of which shall go to the informer, or by imprisonment, or both.

Sec. 28. The roads of the county as enumerated in section 29 are listed according to the following :

Rule—Commence on the east side of a line extending due north from the county seat, and work around in a circle to the east, south, west and back again to the north, always facing outwards and working from the county seat outwards, and always from the left to the right. List first those roads touching the county seat ; next the first left hand branch roads, and any left hand branches of these. Continue with the right hand branches. Follow with the remaining trunk roads and their branches, left hand branches first, right hand branches next, omitting nothing on the left until the entire circuit has been made and the roads of the county are all listed.

Under this rule the roads leading from Martinez, five of them are first listed ; then the first of the five which have branches No. 2, and the list continued in the order explained above.

The ordinance also designates the names to be given to each road.

There are some fine points in connection with this system, which, though interesting, are not essentials. A few of them are here given :

In calculating distances by the block numbers of the ten-block system, always use the even numbers, for the reason that the first or odd number does not indicate the completed block, while the even number always does so. The rule is, divide the even number by two and point off one decimal, and the distance in miles and tenths from the commencement of the road to the end of the block indicated by the number is shown. Take 648 for instance. Divide by two and we have 324. Point off one decimal and we have 32.4 miles.

A Local Illustration.

The map herewith given only shows four miles of the York Road, and but little of the intersecting roads. Consequently the distance traveled over the York Road and several other roads cannot be shown by this map. But a good illustration is given of how to compute distances traveled, by the figures used in explaining the operations of the system in Contra Costa county, California, as follows:

To ascertain the distance from Martinez to Aloha Farm, 41a Granville Way, by the way of the town of Walnut Creek, we first ascertain that Granville Way begins at 213 Contra Costa Highway. Contra Costa Highway begins at Martinez, the exact point of measurement being the Court House. From Martinez to Granville Way is 214 numbers. To 41a Granville Way 42 numbers. Total 256 numbers, or 128 blocks, or 12.8 miles.

From Martinez to Aloha Farm by the way of Vista Ignacio would be calculated as follows:

	Nos.
Court House, Martinez, along C. C. Highway to Camino Diablo....	102
To Vista Ignacio, Nos.	8
To end of Granville Way, Nos.	92
From 66 to 41a Granville Way, Nos.	24
Total.	226

113 blocks, or 11.3 miles.

Now, by referring to the map of the York road, it will be seen that in traveling from the court house at Towson to a point in Govanstown very near to Homeland avenue, sixty numbers are passed. Dividing this by two, we have thirty or 3.0 miles. When all the roads of Baltimore county are laid off in the same way as are those of Contra Costa county, California, and as the York road is laid off on the accompanying map, any one may ascertain before leaving home just the number of miles necessary to travel in order to reach a given point.

Over Several Roads.

We are contemplating a drive from 67 Golden Gate Way, near Lafayette, to 296 Will Pass road, near Antioch, and wish to know before setting out the distance we must travel. We calculate as follows:

	Nos.
From No. 67 to No. 1 Golden Gate Way, at 220 Contra Costa Highway.	68
To 1 Granville Way, at 213 Contra Costa Highway, (i. e., from 220 to 213 Contra Costa Highway, including both numbers).....	8
To 66 Granville Way, at 92 Vista Ignacio.....	66
To 36 Concord Lateral, at 43 Vista Ignacio.....	50
To 36 Camino Diablo.....	36
To 1 Willow Pass road, at 39 Camino Diablo.....	6
To 296 Willow Pass road.....	296
Total.....	530

265 blocks or 26.5 miles.

In the calculations above, all blocks are counted as complete or full blocks. As a rule there is a fraction of a block at the end of each road. Roads will also usually enter or depart from their connecting roads, not at the exact end of a block, but at some point within it. In calculating distances by counting the fractional blocks where a road enters or departs as full ones, the results will be practically correct and very nearly exactly so.

Thus in calculating the distance traveled on Contra Costa Highway from Golden Gate Way to Granville Way, above, the blocks where both roads connect are counted as full ones.

In the records of this work deposited with the county clerk at Martinez, the positions in the block of the farm entrances, connecting roads, landmarks, etc., are given exact as so many feet in or within a block; that is, the distance from the commencement of block. The fractional part of the last block on a road, is also shown in feet, so that the exact length of a road can be ascertained by referring to the records.

Block Division Points.

Where one block ends and another begins, there will, in many cases a mark be found with a number on each side of it

upon one or both sides of the road; or a post may be set at the edge of the roadway with the corner towards the road, having a number on each of the two faces which can be seen from the road. The numbers are those of the blocks on their respective sides of the dividing line or corner of the post.

Where the numbers along a road are shown at all of the block divisions, the number of each block is given twice; once at the commencement and again at the end of the block. Thus upon the left, the numbers would read :

123	|	125		125	|	127		127	|	129
<hr/>										
121	|	126		126	|	128		128	|	130

: pæaɹ ɹɹuom ʇəɹɹe ɹɹɹɹɹ ɹɹɹɹɹ ɹɹɹɹɹ ɹɹɹɹɹ ɹɹɹɹɹ

In order to ascertain the distance to those particular points, we must calculate from the even numbers completing the blocks, *i. e.*, from 124, 126 and 128, respectively.

Roads are not measured the same as land, and, therefore, the two kinds of measurements will in most cases not agree for any long distance. Land boundaries are measured by a series of straight lines. If a curve is to be made the lines are short and the direction changes frequently, but they never run in curves. In land surveying, the distances on a level or horizontal line are always given. Although the tract of land measured may be hilly or mountainous, it is the level distance which is arrived at the same as though the tract itself was flat.

In road measuring, the surface length of the road is given, and when a road is a winding one, it is measured in curves, and not in a series of short angular straight lines, the object being to give the distance to be traveled in order to reach a given location.

Keeping in mind that all calculations are worked out from even numbers, all numbers ending in a cypher, indicate either a mile or a half mile point. If the second figure from the end

of the number is even, it is a mile point. If the second figure is odd, it is a half mile point. Thus, calculating from number 480, we have 240 blocks, 24.0 miles; even 24 miles. Calculating from number 470, we have 235 blocks, 23.5 miles, or in common fractions, $23\frac{1}{2}$ miles.

A mile contains 5,280 feet, a block 528 feet. A mile contains 1,760 yards, a block 176 yards. A mile contains 320 rods, a block 32 rods. A mile contains 80 chains, a block 8 chains. The length of a block, one-tenth of a mile, is expressed in the various ways above named, without fractional numbers.

For Mail Delivery.

Mr. Bancroft thus points out how it could be used in connection with the United States mail service:

“In connection with the free delivery of mail matter to country residents, a feature of the plan, based upon the ten-block system, is here outlined and offered for the consideration of the postal authorities and the public.

For the country postman to go to the very door and ring the bell of every house for which he may have mail matter, over a section containing say 10 to 12 square miles, on some trips going several miles off his direct course, and at others not doing so, must certainly require too much time and would be too costly to be practicable. In little England, where the houses are closer together than in our newer America, it is somewhat different. If, however, mail roads or delivery routes could be established, the postman with his horse and cart could travel over 20 or 30 miles of them daily, rendering the service over the same road every day or every second day, and deposit the mail in mail boxes placed along the road, quite satisfactory service could be rendered, which would be of great benefit and would not cost too much when the residences were reasonably near to each other.

The boxes to receive the incoming mail should be placed by the roadside and be known by the block in which located, and be so marked, and letters, etc., could be addressed to the particular box, as, for instance, Mr. Geo. Reed, Mail Box No. 41, Granville Way, Walnut Creek, Cal., which would soon become abbreviated to M. B. 41, Granville Way. The keys for each mail box should differ from those of all other boxes, and all

who have their mail addressed to a box should be able to obtain a duplicate key through the postmaster at the center of the delivery route. The postman himself would not require a key. The boxes should be of different sizes, and should either be paid for by the people or they should make a deposit on them and be responsible for their safety. They should be placed at all cross-roads and at the entrances of all neighborhood roads, or, as they have been named in Contra Costa, "locals," and at other points along the route where they would accommodate a number of families. Neighbors living off the mail roads could arrange among themselves, that any one going to a box for the mail should also bring all the mail and deliver that belonging to the houses which he would pass on his way home, and hold that for those living beyond him, or they might take turns in bringing the mail from the box for an entire neighborhood and thus establish, as it were, a private branch of the main delivery route.

The postman as he passes along and deposits the incoming mail in the boxes should sound a bugle call, which would give notice to all within hearing that the mail had been delivered. Notices that registered letters had been received could be placed in the boxes with the mail matter, when the person so notified could go to the post office for them. The boxes and openings should be large enough to receive newspapers, books and all packages which are allowed to be sent through the mails; or the top might have a hinged lid which the postman's key would unlock for the insertion of the larger packages. It might, perhaps, be considered better to have the incoming mail deposited in the box only by means of a lid at the top, and have only a very thin opening for local notes, in order to prevent possible errors with the outgoing mail and for greater security.

By an arrangement of the service in this way, the distance to be traveled each trip by the country postman and the service to be rendered would be uniform, and the length of time required to make the trip would vary only with the condition of the roads and the freedom with which the horse moved along.

Side by side with each box for the incoming mail should be placed one for the receipt of the outgoing mail, or the two combined in one box. The postman only would have a key to these boxes. He would unlock and collect the outgoing mail, as he passed along the roads making his delivery. These boxes

would be useful among neighbors, and many a mile of travel would be saved by depositing in his box a note for the farmer who lives a mile or two back in the hills.

Some of the important points of difference between delivering the mail at the door or depositing it in the wayside mail-boxes are these: When the postman on one trip takes the mail for one hundred families, ninety-nine trips are saved to the community, and a great public economy is thus effected. At the point where the postman leaves the road or his direct route and goes to a point, whether it is distant ten rods or a mile, and accomplishes only what a trip by any other one person (even a child) would accomplish, the economy feature ends, and very much better service would be rendered by the postman hurrying along his direct route, and not keep the people farther along waiting, while the countryman would go or send to the roadside for his mail. By this plan, the people toward the end of his route would get their mail earlier and with much greater regularity, for if the postman (perhaps several times in the course of some days) was obliged to go off his route a mile or more, the residents would not know within an hour or two when the mail should reach them.

Need not be Free.

There is no reason why this service should be entirely free. Boxes or drawers at the postoffice are subject to a charge for rent. The Postoffice Department might furnish the wayside mail-boxes, and charge a rental of \$1 a quarter for one family, or 50 cents a quarter, for each family having a key when more than one receive their mail regularly at the same box. Or, all who prefer, could have the exclusive use of a mail-box by paying the full rent for it, when it could be located at their entrance, and bear the same number as their entrance; in some cases more than one being located in the same block—41 and also 41a Granville Way, for instance.

Or, if this service was arranged by the country people who get their mail at the same or neighboring postoffices entirely as a private or neighborhood enterprise, the expenses need not be burdensome. If one man, cart and two horses alternating each day could travel over 25 miles of roads in one direction rendering this service, and on alternate days make a trip of the same length, he would thus serve 50 miles of roads. Upon the basis of there being, on an average, four boxes to a mile, and the payment of \$1.50 per box per quarter, or \$6.00

per year, it would make a revenue to the postman of \$100 per month, which should pay him fairly well for his time and for his horses and cart, and the expense to the people receiving the service would not be excessive.

The postman might also act as an expressman upon his own account, making purchases and doing little errands which would add something to his income and be a convenience to the country people.

The request for a bottle of horse liniment or a pair of sheep shears wanted could be written out and placed in a conspicuous envelope addressed to the postman, which envelopes he himself would furnish. The money to pay for the articles wanted, together with the 15 or 20 cents for the postman's services, could also be placed in the envelope, and be deposited in the outgoing mail-box, or be charged to the purchaser by the dealer, and after the next trip, he would find his package in the incoming mail-box.

One of the San Francisco mail-collectors informed the writer recently that between 6:40 A. M. and 4:30 P. M. he drives 340 city blocks and makes about 200 stops at boxes. For his services with his horse and cart he receives \$108 per month. He uses regularly but one horse, but the poor old fellow looked as though his mail contract was too heavy for him. The collector is obliged to hire a second horse occasionally, so that his net earnings are but about \$100 a month.

The 340 San Francisco blocks would probably be about 25 to 28 miles. The streets are paved but are hilly. In the country, with good roads, one man, cart and two good horses alternating daily should serve sixty miles of roads every second day from one year's end to the other.

These mail roads should be selected with two objects in view—one to locate the route in the most thickly populated part of the country, where the service would be of benefit to the greatest number of people, and the other to locate them upon the most important through roads, for the influence of the mail delivery upon the roads traveled by the postman must certainly be to make them the very best in all the country. Also, if free-mail delivery in the country should be conceded only where the roads have been named, measured and blocked off, and the roadbeds themselves have been put in proper condition, it would be a constant and powerful influence in favor of good roads, as well as rural progress from one extent of the county to the other."

In Contra Costa county, wooden posts are used for the purpose of placing the numbers at the beginning of the blocks. In Maryland, however, stone could be used with better effect, which could be obtained at about the same cost, and would be far less susceptible to injury.

An objection to the wooden posts is that they are likely to be destroyed by mischievous boys or gunners, and by careless and malicious persons generally. These reasons would strongly urge the use of stone in the event of the adoption of the Ten-Block system in any of the counties of Maryland.

EMPLOYMENT AGENCIES.

At the Ninth Annual Convention of the Chiefs of Bureaus of Labor Statistics, held in Denver, Colorado, May 24-28, 1892, the following resolution was adopted:

“Resolved, That the Commissioners of Labor of the different States recommend to the Legislatures of their different States the consideration of the advisability of creating free public employment offices, under State control and supervision.”

Without going into the question as to whether or not it is within the province of this Bureau to make recommendations to the Legislature, the results of an investigation into the methods of private employment agencies cannot be without interest to the highest law-making power of the State. Many of the other State Bureaus have made similar investigations, and have discovered that startling frauds are being perpetrated upon the men and women who have applied for assistance from these employment agencies in securing work. The inquiry of this Bureau, while not revealing any flagrant frauds, shows that a large amount of money is received by the proprietors of these agencies for which little or no service is

rendered. An exception should be noted in the case of the United Catholic Literary Association Employment Agency, an account of whose methods is given below.

The Ohio State Agencies.

The General Assembly of Ohio, realizing that the private employment agencies in that State were not performing the service for which they were ostensibly established, passed a bill, April 28, 1890, providing for the creation of Free Public Employment Offices in Cincinnati, Cleveland, Columbus, Dayton and Toledo. In fact, it is openly charged by the Commissioner of Labor of Ohio, that "prior to the establishment of the 'Free Public Employment Offices,' there were 'Employment Agencies' in nearly all large cities in this State; but they were run for private profit rather than for public good. They were leeches engaged in sucking the life-blood from the poor. These private agencies charged men and women anywhere from \$1 to \$15 for securing them employment, and in most cases they demanded and received a price for accepting an application, whether they secured a place or not. This, every honest-hearted citizen knows to be wrong, because it is evident that when men and women are willing to work, and are unable to find it to do, it is sufficient for them to suffer the hardships which are inseparable from enforced idleness, without taxing them for the privilege of securing work, or for the promise to secure work."

These are strong words, but were, doubtless, justified by the facts, and the establishment of a State office, judging from the reports of the Ohio and other Bureaus of Labor Statistics, has resulted in a decided improvement over the old system. The report of the Toledo office shows that from June 26, 1890, to January 1, 1891, the applications for situations aggregated 3,053, of whom 2,334 were males and 719 were females. During the same period, situations were obtained for 1,329 males and 497 females, a total of 1,826, and 3,968 applications were received from those needing help. The Dayton office reports 4,027 applications for situations; 2,262 applica-

tions for help, and 817 positions secured. The Cleveland office had 3,800 applicants for situations; 4,420 applications for help, and secured 2,180 positions. The Cincinnati office furnished situations for 2,956 persons; received applications for help from 5,590 persons, and had applications for situations from 6,581. The Columbus office had 2,675 for situations; 1,914 from those seeking help, and furnished positions to 1,209 persons. From this it will be seen that the number of "positions secured" was 44.6 per cent. of "situations wanted." When it is considered that there was no money for advertising, this showing was thought to be extremely good. The cost for the year did not exceed \$10,000.

From January 1, to December 31, 1891, the total number of persons seeking situations was 34,371, of whom 21,457 were males and 12,914 females. The total number of employes wanted by employers was 23,208, of whom 9,695 were males and 13,513 were females. The total number of persons having secured employment through these offices was 15,525, and of this number 6,967 were males and 8,558 were females. In other words, 45.2 per cent. of those who applied for work were furnished the means of securing it. These figures lead the Commissioner of Labor to declare that the establishment of these agencies is no longer an experiment, but a success.

Iowa's Experience.

The Iowa Bureau of Labor Statistics recently made an investigation of the private employment agencies in that State and examined a number of persons under oath, (an authority which is not conferred upon the Maryland Bureau) respecting them.

The commissioner of that Bureau expresses his opinion of the results of that investigation in no uncertain terms, in the following paragraph:

"Nowhere in this great State can be found a more perfect expression of 'man's inhumanity to man' than is embraced in the pernicious methods of our so-called employment offices. The song of the 'Spider and the Fly' never formed a more

fitting illustration of duplicity than is found in the management of these offices. They allure the honest and unsuspecting laborer seeking employment into a web of confidence, surrounded by pretended sympathy and false promises, only to rob him of his earnings, and turn him out disappointed and destitute. The above may seem very harsh language to appear in a public document of this kind, but it was penned after the most careful investigation, and is sustained by the sworn testimony of the most creditable and reliable witnesses."

Other State Bureaus that have given the matter any attention are nearly as forcible in their condemnation of the methods used by some of these private employment agencies. In some States, notably Iowa, the Commissioner of Labor has the authority to cause witnesses to be summoned and testify under oath. If this Bureau had the same authority, there can be no doubt that a much more interesting showing could be given. As it is, the most that could be done, was to take the statement of the proprietors of these employment agencies, which are given for what they may be worth.

The Baltimore Agencies.

An attempt was made to secure information from among some of the patrons of these establishments, but it was only partially successful, as many of those to whom inquiries were directed declined to answer them. Those, however, who did answer, are nearly unanimous in the opinion that many of the proprietors of these employment agencies are not paragons of honesty. In fact one of those answering, who is a well-known real estate agent, stated as his belief, that some of the domestics who applied for and secured positions through these agencies are very much like "cappers." That is to say, they are charged with being in collusion with the agencies and accept positions assigned them. After remaining in the position a short time they leave to take a new place, thus being a source of continual revenue to the agency. Others have stated that, though they have repeatedly paid fees of one and two dollars to secure help, not one was furnished. On the

other hand, domestics report that the payment of their fees did not, by any means, insure them a position. They have been told at each succeeding visit to call again until tired out and disheartened, they were driven to seek a situation from other sources.

The investigation made is convincing to my mind that were the proper authority given, evidence could be adduced to show not only that much of the difficulty experienced by employers in securing help may be charged to this collusion, but that, worse still, some of these places, under cover of employment agencies, are really houses of assignation.

The questions asked each person were as follows: Have you ever sought a servant [or situation] at any of the private employment agencies? If so, what one? Did you succeed in securing a servant [or situation] through this agency? If not, was your fee refunded? In addition to these interrogatories, an effort was made to secure any other information bearing upon the subject which was not thoroughly covered in the questions.

Replies to Questions.

Among the answers received, a few samples are given with the names of those answering withheld by request:

Mrs. ——— applied twice to Bloxom's (colored) and did not succeed in either case. Fee was not returned. Don't wish my name used. I have spent money at more than one office with no good results, and fee was never returned. There is room for improvement.

Miss ——— applied at Catholic Bureau and to Miss Froehlinger. An uncomfortable old woman came in answer to my application from Centre street. Miss Froehlinger tried hard to supply me with help. I have no fault to find with either place. They were honest in effort, but no girls came to them who wanted my place. Miss Froehlinger said that at any time that I needed help she would still try to supply me without further fee. I ought to add that I went to Camille but had no dealings with him.

Mrs. ——— reports that she applied at the Catholic Agency and was supplied with a good servant. She says that “the agency did not succeed at first in getting one for me and returned the money. After money was refunded, a servant came that suited, and money was handed back.”

A clergyman reports: I applied to the agencies of Camille, Crane, Sanders and Mrs. Boland. Secured servants in all but the first named. Fee was not returned by either Camille or Sanders. I was led to think that the colored man, Crane, and Mrs. Boland, were fairly reliable, both supplying me with good servants. The fellow Sanders I did not think very well of, and Camille I never got a servant from, though I paid him several fees. This was partly my fault, perhaps.

Mrs. ——— reports that she applied at a number of agencies and was sometimes successful in securing a servant—more frequently not. The fee was never refunded.

The real estate agent, before referred to, says: “I prefer to treat your questions in a general way. I have frequently applied to agencies for help and generally found them unsatisfactory. I pay no money in advance any more, but the other way is as bad, as these agencies appear to have ‘runners,’ ‘first class capable persons,’ &c. They go to you and then you pay; perhaps some excuse is made and the servant departs in a few days, ready to earn her dollar again for her employer. I never have had the fees returned. I have been solicited by a certain house on Liberty street, and informed that I could be supplied, but the fee must be in advance, so I respectfully declined, as I had unfavorable experience with that concern. To sum up: my experience has been that most of these offices will send you some one, without knowing anything of their capabilities to do what you hire them for, and are mostly indifferent servants, with some exceptions. If a reliable agency, conducted on strictly fair and honest principles, was established, and the honesty and capabilities of the servants inquired into, before being sent out, we would have what is now wanted.”

Mrs. ——— I have sought servants in no less than half a dozen private employment agencies. One of these, kept by a woman on Chase street, near Maryland avenue, (Mrs. Boland), supplied me with a cook who remained with us about one year, during which time she was continually importuned by the woman who kept the agency, to accept other situations which she offered her. By this means my cook was finally influenced to leave me.

All the others, with one exception, which I will mention, failed to send me a servant and did not return the money. Last July I applied to the United Catholic Literary Association Employment Agency, 21 and 23 East Centre street, John H. Leach, manager. I found him strictly attentive to business. He fulfilled his engagements and offered to return the money should he fail to supply me with a servant.

My experience has taught me that the employment agencies are, to a very great extent, an inducement to servants to seek new homes, as they hold out to them ever-ready employment.

This latter statement appears to bear out that of the real estate man above mentioned.

Mrs. ——— says she sought a position at Camille's and at Barton's agencies. Secured one from the former, but not from the latter. In fact, heard nothing from Barton, and when the return of the fee was demanded, Barton refused to return more than one half, fifty cents.

Their Business Methods.

A short description of the business methods of each of the employment agencies visited is herewith given. It should be borne in mind that these statements are entirely *ex parte*, being based altogether upon the information given by the proprietors. These statements include the number of applications received both for help and for positions, the number of help supplied and situations obtained during stated periods.

The Old Reliable.

The Old Reliable Employment Office is located at 10 North Frederick street. Thomas O. Matthews is agent, and reports that the office has been in operation at the same place since 1824. Positions are secured as farm hands, farm managers, farm foremen, dairymen, gardeners, hostlers, cooks, waiters and laborers for men, and as housekeepers, cooks, house girls, nurses, laundresses and waitresses for women. This office also secures positions for large numbers of berry pickers and canning-house employes in season. The agent reports that he secures places for 1,000 men and 200 women a month, and that he can always guarantee employment if the applicants will take such work as is at hand of the character sought, and wait a few days until he can place them as they desire. He also reports that the supply is less than the demand.

The charge to the employer for each person furnished is \$1.50, and a fee of \$1 is charged each male for whom a position is secured, while females are charged fifty cents for the same service. This fee, which is called a subscription fee, entitles the employer or employe to the privileges of the office, and keeps their names on the books for three months.

Misses Boone, and Camille.

One of the best known of the employment agencies is that conducted by the Misses Boone, and Camille, at 200 North Liberty street, chiefly for female help. The mode of doing business at this establishment is thus described by Mr. Camille:

Those seeking positions as teachers, governesses, traveling companions, typewriters, etc., are required to deposit a registration fee of \$2, which entitles each one to have her name remain on the books of the firm for thirty days. If a position is secured, ten per cent. of the first month's wages is exacted in addition to the registration fee. If no position be obtained during the thirty days, it is necessary to make another payment of \$2 in order to have the name retained on the books.

The names of those seeking help are placed on the books of the firm for the same length of time for \$1.

To those seeking positions as domestic servants, \$1 is charged as a registration fee, which entitles them to have their name remain upon the agency's books for one year, during which time efforts are made to secure the person a desirable situation. When one is secured and the person is not suited, the agency continues its efforts in behalf of its client until the expiration of the year. In the cases of cooks and chambermaids, a fee of but fifty cents is charged. In fact, Mr. Camille states that he will pay a premium of fifty cents to anyone bringing to him this class of help. He says that he has 200 applications a week for employment, of which fifty are those of cooks. The number of employers seeking help who call during a week he computes at 350.

Those whose names are recorded on the books of the concern number about 5,000, one-fifth of whom, Mr. Camille says, are cooks. He calls this the "Ladies' Registry Association," and it has been in operation about three years.

This firm of Boone and Camille has some different methods of doing business from those of the other agencies. For example, Mr. Camille says that he watches the death notices in the daily papers, and when an announcement is made of the death of a married woman, he immediately writes to the husband a letter of condolence, with an offer of the immediate services of a housekeeper, which Mr. Camille naively informs the husband, "will bring back happiness into the family."

Another method of this firm is to send a printed postal card to persons who have advertised either for help or for a situation. These cards direct attention to the agency and contain a number of more or less irrelevant mottoes.

U. C. L. A. Employment Agency.

The agency that is, without doubt, doing the most good for those seeking employment, is the United Catholic Literary Association Employment Agency, 21 and 23 East Centre street.

This Bureau was established through the beneficence of the Rev. Edmund Didier, a well-known Catholic priest. The building occupied by the Association was deeded to it by the Rev. Mr. Didier, the only condition being that the Association pledged itself to conduct a free employment agency. This condition has been observed, in so far as it was possible, and situations are procured for domestic and other servants free of any charge. A fee of \$1 is charged to those seeking help, which is invariably returned when the applicant is not suited. For situations in the higher grades of employment, such as typewriters, clerks, bookkeepers, &c., a fee is also charged. As in the case of those seeking help, when the parties are dissatisfied with the position to which they have been assigned, the fee is returned.

The Agency is non-sectarian and philanthropic, and is doing a good and charitable work. It is under the management of Mr. John H. Leach. It has been in operation since January 3, 1893, and, as it becomes better known, will increase its field of usefulness. About 250 persons have been furnished employment since its establishment.

Ladies' Select Employment Agency.

At 404 West Saratoga street, in a private residence, is the "Ladies' Select Employment Bureau," owned and operated by Theodore Barton. He has been in business for fifteen years, and the positions he secures are mostly for female cooks and house servants, and occasionally a coachman or male waiter. He has about fifty applications weekly for work, and about twenty-five for help. He says he secures twenty-five positions a week. He charges the employers \$1, and employs fifty cents for registration, which keeps their names on the books for one month.

Mrs. Hanly's Select Bureau.

Mrs. Margaret Hanly's Select Employment Bureau is located at 1100 Cathedral street, and secures general household positions for women. She has fifty applications for work and

twenty-five for help each week, on an average, and secures twenty-five positions. She says she charges \$1 to the employer and makes no charge to the employee.

Mrs. Garrell's Office.

The employment office of Mrs. Garrell, located at 204 North Calvert street, secures positions for cooks, waiters and general house servants. She has been doing business in the same place for over five years. She reports that fifty applications for help and thirty-five for work are received each week, and of that number she places about thirty women in positions. The charges are \$1 to the employer, and fifty cents to the employee.

The Excelsior.

The Excelsior Employment Office, M. Price, proprietor, is at 322 West Biddle street. Mr. Price stated that he had only been in the business four months, and that he was not yet sufficiently settled to give a statement of the number of positions secured. He charges employers for securing female help \$1, male help \$1.50, and male employees \$1, female fifty cents for each position secured, but makes no charges until both parties are suited.

Charley's United Protective Office.

"Charley's United Protective Employment Office, for ladies and girls," is the name of the agency at 109 East Mulberry street, operated by a colored man named Charles A. Sanders. Sanders has been in the business in various parts of the city for nine years. In the last two years he has been located at 588 St. Mary's street, 202 Richmond street, and the present location.

He advertises that he loans money in connection with his business. He claims to secure about fifty persons positions each week, mostly female domestics, and charges \$1 to both the employer and employee.

Bloxom's Bureau.

At 1222 Park avenue, in connection with an express and carpet cleaning establishment, L. W. Bloxom, colored, conducts an intelligence office, and secures domestic positions for both men and women. He has been in this business six years. He reports that he receives from twenty-five to thirty applications for work, and from twenty to twenty-five applications for help, each week. Of this number he places, on an average, twenty a week. His charges are: to the employer, in the city, \$1, out of the city, \$1.50; to female employes, fifty cents, and to male employes, \$1.

Weems' Office.

Dr. C. H. Weems, colored, has an intelligence office at 533 North Howard street, which he conducts in addition to his profession as chiropodist. He operates this office for the convenience of his patients, who very often ask him to secure for them a cook, servant or coachman. He obtains about five positions a week, nearly all of which he fills with colored people. No charge is made until the parties are suited, when a fee of \$1 from the employer, and fifty cents from the employe is required.

Helen Cooper's Agency.

Helen Cooper, colored, conducts an intelligence office for "select help" at 1213 Park avenue. She has been in the business for about one year, and she secures employment for domestic servants only. She could not estimate the weekly number of applicants, nor could she give the number of situations secured. The charges are \$1 to employer and fifty cents to employe.

M. Bundy's.

M. Bundy, colored, has kept an intelligence office at 906 Park avenue for about two years, and secures positions only for general domestics. Most of her applications for work are from colored women. She reports that she secures six positions a week, and charges \$1 to the employer and fifty cents to the employe.

B. T. Crane's.

At 844 Park avenue, B. T. Crane, colored, has an intelligence office, in which she does a small business, not securing more than three or four positions a week. These positions are mostly as domestics in private families. She charges the employer \$1 and the employe fifty cents, but does not make any charge until both parties are suited. This office is simply an adjunct to a large oyster business conducted during the winter months.

For Typewriters and Stenographers.

Wyckoff, Seamens and Benedict, the proprietors of the Remington typewriter, conduct a free employment department in connection with their regular business. During the present year they placed, on an average, ten stenographers a week in this city.

Mrs. Bolden's Agency.

Mrs. Bolden, a dressmaker, at 34 West Chase street, conducts an employment agency, also, for women only. She says that she gets situations for about six persons a week and boards young girls who are out of employment and seeking a place. Those who are unable to pay their board are given time to earn enough to liquidate their debt. When Mrs. Bolden was asked if this method of conducting business was not somewhat unusual, she replied that she relied entirely on the honor of those with whom she dealt, and if they failed to pay her she paid no further attention to the matter. Mrs. Bolden charges \$1 to those seeking help and fifty cents to those desiring a situation.

The Quaker City.

The Quaker City Employment Office, 530 North Calvert street, is said to be conducted by a Mr. Mann. When inquiry was made there for information, the agent of this Bureau was told by the man in charge that he did not propose to give out any

information whatever, as he did not consider his private business any affair of the State's.

No better argument could be made for an increase in the authority to be given to the Bureau, if it is considered advisable, to get such information. Every other proprietor of these employment agencies might have refused to give information on the same ground, and this Bureau would have been powerless to enforce its request.

The Alleged Profits.

The following table shows the number of situations secured by these employment agencies, as stated by the proprietors and managers thereof, the fees charged to employer and employe, and the total amount received by each agency from these two classes.

An important showing, if the figures given by these proprietors are correct, is that the large sum of \$72,738 is paid annually for the very doubtful services, in many instances, rendered by these agencies. Of this amount \$32,446 comes from the savings of those who most keenly feel such a tax; \$40,292 is taken from the employing class, who, though doubtless willing to pay for good help, are very often harassed and bothered by the incentive always present, offered to good and reliable servants to leave one situation to take another, thus earning a new fee for the agency. The enormous waste consequent upon this system is at once apparent. Though the figures show that 38,092 situations were secured for this sum of money, there are no figures to show how many different persons were furnished the facilities for securing employment. It may be, indeed that but a very few persons were placed in situations, and these may have been placed in half a dozen, or even one hundred different houses.

The State of Ohio evidently sought to correct this waste by the establishment of State Free Employment Offices. These offices, five in number, cost in the aggregate \$10,000, or an average of \$2,000 for each city.

Table showing the number of situations secured by the employment agencies, as stated by the proprietors thereof, the fees charged to employer and employe, and the total amount received by each agency from these two classes.

NAME OF AGENCY.	Situations Secured.	Fee Charged.		Amount Received.		
		Employer.	Employe.	From Employer.	From Employe.	Total.
Old Reliable... ..men {	12,000	\$1 50	\$1 00	\$18,000	\$12,000	\$30,000
.....women {	2,400	1 50	50	3,600	1,200	4,800
Boone and Camille. ...general work {	7,200	1 00	1 00	7,200	7,200	14,400
.....cooks {	2,600	1 00	1 00	2,600	1,300	3,900
.....members of association {	5,000	.....	1 00	...	5,000	5,000
Theodore Barton.....	1,300	1 00	50	1,300	650	1,950
Mrs. Hanly.....	1,300	1 00	50	1,300	650	1,950
Mrs. Bolden.....	312	1 00	50	312	156	468
Mrs. Garrell.....	1,560	1 00	50	1,560	780	2,340
M. Price.....	†	1 00	50	†	†	†
*C. A. Sanders.....	2,600	1 00	1 00	2,600	2,600	5,200
*L. W. Bloxom.....	1,040	1 00	50	1,040	520	1,560
*Dr. C. H. Weems.....	312	1 00	50	312	156	468
*M. Bundy.....	260	1 00	50	260	130	390
*B. T. Crane.....	208	1 00	50	208	104	312
*Helen Cooper.....	†	1 00	50	†	†	†
Total.....	38,092	†\$1 06	†66	\$40,292	\$32,446	\$72,738

* Colored.

† Not given.

† Average.

NEW INDUSTRIES.

The subjoined list shows the number of new industries started in Maryland from January 1, 1892, to September 30, 1893, which latter date was the latest available for use in this report.

Many of those mentioned are old firms which have increased their capital by adding to their plant, either in improved buildings or machinery. During the six months from April 1st to September 30th, Maryland, in common with most other communities, felt the effects of the financial stringency, and many enterprises that had been projected, were of necessity abandoned, owing to a want of funds, but as most of the transactions of Maryland capitalists are very largely on a cash basis, they were in a better position to recover than those whose business demanded long credits. All of the great staple industries are in a very fair condition, the volume of business insuring a profit commensurate with the investments. The few failures resulting from the disturbed condition of our finances, have been either the result of the inability of the merchants to turn good collateral into cash or to the unsound condition of the concerns that have failed. On the whole, however, our merchants appear to be in a position to withstand successfully a strain even greater than that to which they have just been subjected.

January 1 to December 31, 1892.

ABERDEEN.

W. A. Bobb, of Odessa.....Label Factory.
Aberdeen Can Co.....Can Factory.

ALBERTON.

Alberton Cotton Mills.....New Machinery.

ARLINGTON.

W. Arlington Water Co.....Water Works.

BALTIMORE.

Maryland Glass Manufacturing Co.....	Glass Works.
Shenandoah Lumber & Iron Co	
Brusstar Shipbuilding Co.....	†Ship Yards.
International Novelty Co.....	Manufacture Toys and Novelties.
Grillet & Mann Co.....	Tin Can Factory.
Baltimore Purse & Pocket-book Mfg. Co.	Manufacture Leather Novelties.
Evans Mining, Milling & Smelting Co..	
London Novelty Co.....	
Reese Printing Co.....	Printing Works.
Electric Light & Railroad Co.....	
Ries Electrical Co.....	Increase Capital.
Baltimore & Ohio Railroad.....	Electric-power Plant.
John P. Emerson.....	Paper Bag Factory.
Baltimore Traction Co.....	Power Plant.
Western Construction Co.....	
Roland Park Co.....	Water Works.
Graf Fire-Proof Paint Co.....	Paint Works.
Campbell & Zell.....	Addit'l Ship and Bridge Bldg. Plt.
Cornet Steel Co.....	Manufacture Iron and Steel.
R. M. Spedden & Co.....	Machine Shops, &c.
National Supply Co..	Construction of Railways, &c.
Com. Fibre & Extract Co	
Maryland Manufacturing Co.	Hardware Works.
Chesapeake Belting Co.....	†Belting Factory.
Mod. House Letter-box Co.....	Manufacture Letter-boxes.
North Star Iron Co.....	
Copeland & Tyler Manufacturing Co ..	Spring-bed Factory.
Hill Pen-How Leather Dressing Co	
Wood, Harmon & Co.....	Water Works.
Calvert Brick Co.....	Brick and Tile Works.
Automatic Music Holder & Leaf Turn. Co.	
Central Railway Co.....	Electric-power Plant.
Sharp & Dohme.....	†Drug Factory.
Southern Electric Co.....	*Electrical Works.
Pharmaceutical Review Co.....	Publishing.
Chimes Publishing Co.....	Publishing.
Jervis Spencer Co..	Curtain-roller Factory.
S. D. Warfield Co.....	†Machine Works.
Christopher Lipps Co.....	†Soap Factory.
Evening News Publishing Co.....	†Publishing.
National Brewing Co ..	†Brewery.
Independent Ice & Coal Co.....	Ice Factory.
Campbell Barrel Machine Co.....	Barrel, etc., Factory.
Thomas Manufacturing Co.....	Manufacturing.

BALTIMORE—CONTINUED.

Franklin Davis Nursery Co	Nursery.
Klank Manufacturing Co.....	Silver-plating Works.
National Paving Co.....	
Cork Pulley Covering Co.	Pulley-covering Factory.
Manufacturers' Record Publishing Co...	†Publishing.
Southern Electric Co.....	Electric-light and Power Plant.
Baltimore Tin Specialty Co.....	Tinware Factory.
L. Felber Co.	Manuf Cotton and Woolen Goods.
National Sanitary Co.....	Fertilizer Factory.
Baltimore Waste Co	Elec.-light Plt.; †Cotton Waste Fac.
Malleable Iron & Steel Casting Co.....	Iron and Steel Casting Works.
Crown Cork & Seal Co.....	†Cork Factory, &c.
Sommerfield Brewing Co.....	Brewery.
W. H. Towles Manufacturing Co.	Manufacture Underwear.
Baltimore Cold Storage & Warehouse Co.	†Cold-storage Plant.
Baltimore Marble & Granite Cleaning Co.	
Mount Vernon Co.....	†Cotton Mill.
Atlas Soap Co.....	Manufacture Soap.
Hudnutt Milling Co., of Terre Haute, Ind.	Corn Mill.
J. H. Chatterton & Co.....	‡Furniture Factory.
A. S. Abell Co.....	Publishing and Printing Works.
Maryland Distilling Co.....	Distillery.
Orient Distilling Co.....	†Distillery.
Thomson-Houston Electric Co.....	Electric-power Plant.
Zell Manufacturing Co	Machine Works.
Wharton & Barron Publishing Co.....	
R. M. Spedden Co.....	Imp. Ship-yards, etc.
Baltimore Shipping Co.....	
J. C. Lake & Son Co.....	Manufacture Steering-gear, etc.
Ocean Beach Land & Improvement Co..	
Wm. E. Woodyear & Co.....	†Flour Mill.
Farmer Publishing Co.....	
Mayer Magic Soap Co.....	
Coates & Co.....	‡Tinsplate Mill.
Thomson Manufacturing Co.....	Manufacture Iron, etc.
Baltimore Transfer Co.....	
Baltimore Electric Refining Co.....	†Metal Refinery.
J. B. Brown Co.....	Manufacture Liquors, etc.
Baltimore Copper Co.....	Acid Chamber.
Moses Frank & Louis Steel.	Clothing Factory.
Florence Sterling Silver Co.....	Manufacture Plated Ware.
H. S. Hires Co.....	Manufacture Shafting, etc.
Consumers' Ice Co.....	
Southern Electric Co.....	Increase Capital.

BALTIMORE—CONTINUED.

E. F. Kirwan Manufacturing Co.....	Tin Can Factory.
Jas. D. Mason Co.....	Cracker Factory.
Maryland Electric Co.....	Electric Plant.
Sunner & Gerlach.....	‡Sash Factory.
Clendenin Bros.....	Machine Works.
Thiell Combustion Governor & Mfg. Co.	Manufacture Machinery, etc.
E. A. Jones Paper Box Co.....	Paper-box Factory.
The Vibrometer Co.....	Manufacturing Vibrometers.
Mason Produce Co.....	
Maryland Bleach and Dye Works.....	New Machinery.
Baltimore Waste Co.....	New Machinery.
Leeds Land Co.....	
Baker Fruit Co.....	
Lyman, Fuller & Post Co.....	Constructing Railways, etc.
Wm. G. Michael.....	Saw Mill.
Price Lime Co.....	Lime Works.
City & Suburban Railway Co.....	Electric-power Plant.
Evans Marble Co.....	Deal in and Dress Marble.
Locust Point Iron and Steel Works.....	*Tinplate Plant, etc.
Enterprise Scow Co.....	
W. H. King & Co.....	‡Saw Mill.
McCormick & Co. (incor.).....	Manufacture Extracts, etc.
Whiteford Chemical Co ..	Manufacture Chemicals, etc.
Maryland Surveying Co.....	Engineering, etc.
E. Rice Daniel, of Wales.....	Tinplate Mill.
Burrough Bros. Manufacturing Co.....	Chemical Works.
Interment Timber & Lumber Co	
F. A. Lazenby & Co.....	Manufacture Machinery.
Geo. H. Geiger Co.....	Canning Factory.

BAY VIEW.

Bay View Electric Light & Power Co...	Electric Plant.
---------------------------------------	-----------------

BEL AIR.

Whiting Novelty Manufacturing Co...	Iron and Wood Novelty Works.
Cambria Marble Co	Marble Quarries.
Jno. Moore.....	†Flour Mills.

BERLIN.

.....	Woodenware Factory.
-------	---------------------

BLOOMINGTON.

G. C. Pattison.....	Coal Mine.
---------------------	------------

BOONSBORO.

Fruit Package, Saw & Planing Mill Co..Saw & Planing Mill, &c.
Boonsboro Water Co.....Water Works.

BROOKLYN.

Curtis Bay Electric Railway.....Electric-power Plant.

BROOKLANDVILLE.

James M. Bryan & Son.....†Flour Mill.

BRUNSWICK.

Jesse Krieg, Adamstown.....Carriage Factory.

BUCKEYSTOWN.

Buckeystown Packing Co..Packing House.
Buckeystown Canning Co.....Cannery.

BURKITTSVILLE.

J. D. Ahalt.....†Distillery.

CAMBRIDGE.

Cambridge Electric Light & Power Co..
City.....Water Works.

CATONSVILLE.

Eden Construction Co.... Elec. Light Plant, Water Works, &c.
Catonsville Water Co..†Water Works
Eden Park Land Co.....Electric Light Plant.

CHESTERTOWN.

Chestertown Cream & Ice Co.....Creamery & Ice Plant.
Mr. Baungardner, of Pa.....Machine Shops.
Chestertown Water Co.†Water Works.
Mr. Lamotte, of Baltimore.....Canning Factory.
American Strawboard Co.....‡Strawboard Factory.

COOPTOWN.

Geo. W. MorseSaw Mill.

CRISFIELD.

Buxten Water Co.....Water Works.
Crisfield Ice Manufacturing Co.....Ice Factory.

CUMBERLAND.

Cumberland Iron & Steel Shaft Co.....Shafting Works.
 Lehigh Val. Spg. Wks., of Lehigh, Pa. Spring Works.
 Cumberland Steel & Tinplate Co.....Steel & Tinplate Works.
 White Lumber Co.....Lumber Mill.
 Josiah Holmes... Rolling Mill.
 T. McElfish, of Flinstone.....Marble Quarry.
 Cumberland Ice & Manufacturing Co...Ice Factory.
 Cumberland Steel & Iron Co.....†Rolling Mills & Steel Plant.

CURTIS BAY.

Baltimore Sugar Refining Co.....Increase capital.
 Baltimore Rolling Mill CoRolling Mill.
 E. T. Pilkinton & Co., of Richmond....Tobacco Factory.
 Curtis Bay Water Works Co.....Water Works.

DRUM POINT.

Calvert Brick Co.....Brick Works.

DUNKIRK.

Weed Brothers, of New York.....‡Silicate Works.

EASTON.

Crystal Washer Co.....Washing Machine Factory.
 M. T. G. Earle.....Shirt Factory.
 Jos. Adams and A. B. McWilson.....Chair & Swing Factory.
 Hubbard & Brother.....Electric Light Plant.

EDGEMONT.

J. M. Stover.....Canning Factory.

ELKTON.

Scott Fertilizer CoIncrease Capital.
 Sentinel Printing & Publishing Co.....
 Elkton Electric Light Co.....Electric Light Plant.
 E. W. Dawson..... Creamery.

ELLICOTT CITY.

Openheimer, Oberndorf & Co.....Shirt Factory.
 Jos. Schreiber, of Baltimore.....Water Works.

EYLER.

Geo. Smith.....Broom Factory.

FALLSTON.

H. S. Robinson‡Canning Factory.

FINKSBURG.

F. L. Hernig.....†Flour Mill.

FREDERICK.

F. K. Ward Cream'y Co. of Wash'n, D. C. Creamery.
 Kingsley & Flook..... Creamery.
 Frederick City Brick Works... Enlarged.
 American Power Fence Machine Co... Manufacture Machinery.
 Geo. K. Birely & Sons.....†Tannery.
 Frederick City Engine & Machine Works.†Engine & Machine Works.
 S. E. Brown..... Fencing Factory.
 Union Foundry & Machine Works.....†Foundry & Machine Shops.
 Frederick City Lime Co..... Lime Works.
 Jas. H. Gambrill.....†Flour Mill.

FROSTBURG.

Frostburg Gas Light Co..... Improve Plant.
 Casper Workman Coal Mine.

GAPLAND.

Gapland Turnpike Co.....

GLEN BURNIE.

Glen Burnie Clay Co..... Pottery & Tile Works.

HAGERSTOWN.

J. F. Ryder..... Vinegar Works.
 Danzer Lumber Co..... Additional Machinery.
 Rohrer Wagon Wheel & Felloe Co..... Wagon & Wheel Factory.
 Crawford Manufacturing Co.....†Bicycle Factory.
 Surbridge Manufacturing Co..... Electric Light Plant.
 D. A. Stickell..... Cornmeal Mill.
 Surbridge Manufacturing Co..... Bicycle Works.
 Hess Manufacturing Co..... Increase Capital, &c.

HILLSBOROUGH.

Knotts & Thompson..... Canning Factory.

HYATTSVILLE.

C. M. Coen, of Washington, D. C. Elec. Lt. Plt., Water Wks. & Ice Fy.
 Hyattsville Brick Co..... Brick Works.

IVY CITY.

Childs & Sons.....†Brick Works.

JERUSALEM MILLS.

W. A. Wilson.....†Flour Mill.

LAUREL.

Laurel Canning Co.....Cannery.

Electric Light, Power & Heat Co.....Electric Plant.

LONACONING.

New Central Coal Co.....New Mining Plant.

John Story.....†Woodworking Factory.

Geo. Schwarzenbach, president.....Ice Factory.

LORELEY.

F. H. Corthell & Co., of Boston....Electric Plant.

MANCHESTER.

C. J. Ganter.....Cigar Factory.

MIDDLETOWN.

J. L. Doub & Co.....†Creamery.

.....Water Works.

MILLINGTON.

John Hubbard.....Creamery.

MORGANZA.

Thos. S. Turner.....†Saw Mill.

MT. WASHINGTON.

Mt. Wash. Electric Lt. & Pow. Co....Electric Plant.

NORTH BRANCH.

C. R. Wilson.....Vinegar Factory.

N. W. Steel.....Dye Works.

NORTH EAST.

E. T. B. Day.....Basket Factory.

Hover Ink Co.....Ink Factory.

Armstrong, Squires & Co.....†Flour Mill.

OAKLAND.

Preston Lumber & Coal Co.....Mfr. Lumber and Mine Coal.

N. W. Steel.....†Woolen Mill.

Oakland Electric Light & Power Co.....Additional Machinery.

Oakland Improve, Mfg. & Develop. Co..Developments.

ODENTON.

Murray Canning Factory.....†Canning Factory.

OELLA.

Mentzel Paper Co.....Paper Mill.

OXFORD.

Bowman's Bazar Elec. Lt. & Pow. Co .. Electric Light Plant.

PARSONBURG.

C. C. Perdue.....Canning Factory.

PERRYVILLE.

Perryville Water Co.....Water Works.

PORT DEPOSIT.

Port Deposit Stone Co.....Stone Quarries.

RAYVILLE.

George W. Hoshall.....Saw Mill.

SALISBURY.

E. S. Adkins.....Factory.

Salisbury Ice Manufacturing Co.....†Ice Factory.

SAVAGE.

W. H. Baldwin, Jr. & Co†Cotton Mill.

SOUTH BALTIMORE.

Ryan & McDonald Manufacturing Co...Increase Capital.

SPARROW'S POINT.

.....Stove Works.

Maryland Steel Co.....†"A" Furnace.

Maryland Steel Co.....New Boiler Shop.

Bear Creek Shipbuilding Co.....Ship Yards.

TEXAS.

L. B. McCabe & Bro.....Limestone Quarry.

TOWSON.

Towson Lumber & Coal Co.

TRAPPE.

Trappe Creamery Co.....Creamery.

UNION MILLS.

Nelson Koontz..... †Saw Mill.

WESTMINSTER.

J. W. Lockard & Philip M. Hunter.... Manufacture Furniture.

Westminster Water Co Water Works.

The Electric Light Co. of Carroll Co.... Electric Light Plant.

January 1, to September 30, 1893.

ANNAPOLIS JUNCTION.

W. S. Powell..... Chemical Laboratory.

AVALON.

Elk River Bridge Co..... Construct a Bridge.

AVONDALE.

Samuel H. Reifsnider*..... †Flour Mill.

BALTIMORE.

Chesapeake Resort Co.....

E. H. Sharretts & Bro..... Canning Factory.

J. F. W. Dorman Co..... Rubber Stamp Works, etc.

Jacob Wheatfield..... †Box Factory.

Victor G. Bloede Co..... Manufacturing.

Patuxent Cedar Point Co.....

Terminal Warehouse Co

Painter & Morrison Co..... Manufacture Electric Lamps, etc.

Merchants' Coal Co..... Dealers.

Jas. Robertson Manufacturing Co Lead Pipe Works, etc.

Robert C. Griffith Co..... Packing House.

Schley & Collins Co..... Florists.

Southern Toy & Novelty Co..... Manufacturing.

National Mfg. Ice & Refrig. Mach. Co...

Baltimore Lumber Co.

Engel, Kirshneider & Regneir..... †Coppersmith Works.

Baltimore Sugar Refining Co..... †Sugar Refinery.

Balto., London & Santos Coffee Co.... Importers.

Mt. Carmel Annex Cemetery Co.....

Standard Electrotpe Fdy. & Eng. Co...

High Rock Park Dev. Co

Maryland Land Co.....

Babylon Wool Co..... Wool Factory.

Asbestos Canning Co..... Canning Factory.

Del Credere Boot & Shoe Co..... Manufacturing Shoes.

W. H. Riddle Mantel Co..... Dealers.

BALTIMORE—CONTINUED.

John D. Lucas Printing Co.....	Printing Works.
Gibson Glazed Brick & Terra-Cotta Co..	Brick Works.
Sanford Packing Co.	Packing House.
H. Steffens Co.....	Packing House.
National Perfumery Co.....	
The Building Material Co.....	Lumber Mills.
C. Eppler & Sons.....	‡Barrel Factory.
S. Helldorfer Sons.	‡Brewery.
Great Falls of the Potomac Co.	Deal in Timber, etc.
McCay-Howard Engine Co.....	Deal in Elec. Wks., etc.
W. H. Perot.....	‡Brick Works.
Baltimore Oil & Grease Co.....	Manufacture Oil.
Bolgiano Water Motor Co.....	Machine Works.
Selbern Heights Improvement Co....	Land Improvement.
Chesapeake Fish Co.....	
Perfect Clasp Co.....	Manufacture Clasps.
Domestic Light and Power Co.....	Electric Light & Power Plant.
Cotton Oil Refining Co.....	‡Cottonseed-oil Refinery.
Mt. Carroll Improvement Co.	
Friedenwald Co..	Printing Works.
Leonhardt Pneu. Safety Car Fender Co..	Manufacture Fenders.
Jos. A. LeBrou Co.....	Ship Chandlery.
Dressing Supply Co.....	Manufacture Cabinets.
Roman Confectionery & Cordial Co....	Manufacture Candy.
Emerson Drug Co.....	‡Drug Works.
Antiseptine Manufacturing Co.....	Manufacture Tooth Wash.
Republican Publishing Co	Publishers.
Benson & Washburn Co.....	Manufacture.
Fibre Wool Co.....	Manufacture.
Citizens' Express Co.....	
Ruth & Son.....	Can Works.
West Baltimore Land Co.....	Land Improvement, etc.
Patapsco Iron Co.....	Iron Works.
Bromo Drug Co.....	Manufacturing.
Macrae & Donaldson.....	Manufacture Batteries.
Monumental Distillery Co.....	Manufacture Wines, etc.
Gray Improvement Co.....	
Detrick Fertilizer & Chemical Co.....	
Automatic Electric-light Extinguisher Co.	Manufacturing.
Geo. P. Cronise Co.....	
Smith & Schwarz Brick Co.....	Brick Works.
Simon's Sons Co	Dry Goods.
Rogers Printing Co....	
Rapid Contracting Co.....	

BALTIMORE—CONTINUED.

Whiting & Waples Co.....	
Van Lill Preserving Co.....	Canning Fruit, etc.
Kenwood Novelty Co....	Toy Factory.
Jas. S. Gary & Son.....	Cotton Mill.
Sommerfield Brewing Co.....	Ice Factory.
Steam Generator & Flusher Mfg Co....	Mfg. Steam Flushers, etc.
Evans Marble Co.....	Marble Quarries & Works.
Morris Publishing Co.....	
Brush Electric Co.....	†Electric-light Plant.
Baltimore Forwarding & R. R. Co.....	Machine Shops.
American Phosphate & Chemical Co....	‡Phosphate Plant.
The Sherwood Co.....	Manufacture and deal in Lumber.
Smith-Diffenderfer Manufacturing Co...	Manufacture Confectionery Mchs.
Baltimore Cold Storage Co.....	Addtl. Ice Machine.
Combination Cabinet Towel Supply Co..	
People's Telephone Co	
Jno. H. Williams Publishing Co....	
Critic Publishing Company.....	
Coaline Co.....	Mfr. Chemical Preparations.
Fait & Sagle Co.....	Canning Factory.
Stewart Fruit Co.....	Mercantile.

BERLIN.

J. J. McClusky, of N. Y.....	Woodenware Factory.
------------------------------	---------------------

BIG SPRING.

John Martin, President.....	Creamery.
-----------------------------	-----------

BOOTHBY HILL.

James R. Gorrell.....	Creamery.
-----------------------	-----------

BRUNSWICK.

Company.....	Build a Bridge.
Stock Company.....	Grain Elevator.

CAMBRIA.

Cambria Land Co.....	
----------------------	--

CAMBRIDGE.

Cambridge Water Co.....	Water Works. .
-------------------------	----------------

CARROLL.

Carroll Woolen Mills.	Additional Machinery.
----------------------------	-----------------------

CARROLLTON.

Carrollton Canning Co....	Canning Factory.
---------------------------	------------------

CHESAPEAKE CITY.

W. C. Powell & Co.....†Creamery.

CHESTERTOWN.

Armstrong & Arthurs.....Cannery.
Edward Spear..... †Flour Mill.
J. P. Price.....Flour Mill.

CLAIBORNE.

Claiborne Packing & Improvement Co... Packing-house, etc.

COCKEYSVILLE.

Hinkle & Gaither Manufacturing Co... Agricultural Implement Works.

COOPSTOWN.

W. A. Dusham.....Canning Factory.

COWENTOWN.

Star Bottling Co.....†Bottling Works.

CRISFIELD.

Crisfield & Island Steamboat Co.....

CUMBERLAND.

A. B. McCarty Bark Ext. Co.....
D. J. Blakiston & John Schaidt.....Lumber Mills.
Cumberland Paper Co..... Paper Mills.

DORSEY.

James J. Miller.....Granite Quarry.

EASTON.

Easton Ice Co.....Ice Manufacturing.
Farmers' Packing Co.....Packing-house.
Easton Water Co.....Ice Plant.
J. Langrall & Bro.. ..Cannery.

EDEN.

D. Andrews, of Phila.....Kindling-wood Mill.

ELK RIDGE.

Elk Ridge Bridge Co.

ELKTON.

McGaw & Smith, of Wash.....Canning Factory.
Keys & Miller Lumber Co.... Lumber Mills.
Powers & Coray. Machine Shop.
C. S. Garrett & Son†Paper Mill.

ELLCOTT CITY.

Savage Manufacturing Co..... †Cotton Mill.
 Ellicott City Electric Light Co.... . Enlarge Plant.
 Oppenheim & Oberndorf. †Shirt Factory.
 John McKenzie.. Stone Quarries.
 Edward Thompson..... . Stone Quarries.

FREDERICK.

P. L Hargett Co.....
 Frederick Electric Light Co..... †Electric-light Plant.
 City..... Improve Water Works.
 Frederick City Packing Co..... †Packing house.
 Goode Manufacturing Co..... Straw-hat Factory.

FROSTBURG.

W. R. Percy et al.. Tinplate Mills.

GAITHERSBURG.

Milling & Manufacturing Co..... Barrel Factory.

HAGERSTOWN.

Washington County Water Co..... Improve Water Works.
 Hancock Bridge Co..... Increase Capital.
 Windsor Knitting Mills..... New Machinery.

HARRISONVILLE.

William Baker..... Canning Factory.

HAVRE DE GRACE.

Hughes & Rigby Engine Co..... Electric-light Plant.

HEBBVILLE.

Asbestos Canning Co... Cannery.

HILLSBORO.

J. M. Beaven..... Saw, Planing, Shingle and Lath Mill

HYATTSTOWN.

Mr. Cholein..... Shoe Factory.
 W. Burdette & Co..... Chair Factory.
 Dudrow & Dronenburg..... Chair Factory.

HYATTSVILLE.

Hyattsville Elec. Heat, Light & Pow. Co. Electric Plants.

KEEDYSVILLE.

John Snear.....‡Grist Mill.

LANSDOWNE.

C. B. Reed et al.....Tile Works.

LAPIDUM.

Spencer & McGonigle.....Cannery.

LEWISTOWN.

A. E. Farmworth.....‡Cider Mills, etc.

LONACONING.

Leonard Kolmer & Co.....Bottling Works.

M. BowmanMarble Works.

Evans Mill.....‡Saw Mill.

MECHANICSTOWN.

American Signal Co.....Manufacture.

MICHAELSVILLE.

Isaac W. Botts.....‡Cannery.

MIDDLEBURG.

Mr. Walden.....Flour Mill.

MIDDLETOWN.

Owen, Patterson, of Baltimore.....Water Works.

MONTGOMERY COUNTY.

Potomac Brick & Tile Co.....Brick and Tile Works.

NORTHEAST.

Maryland Clay Co.....Kaolin Mines and Works.

OAKLAND.

Mountain Telephone & Electric Co.....

G. W. DelawderSaw Mill.

PARSONSBURG.

Stock Company.....Crate and Basket Factory.

PERRYVILLE.

Armstrong Stove & Manufacturing Co..†Stove Works.

PORT TOBACCO.

La Plata Publishing Co.....

POWHATAN.

Powhatan Imp. Co.....†Cotton Mill.

PRINCESS ANNE.

Princess Anne Manufacturing Co.....Basket Factory.

RIDGELEY.

Rigden & Ramsdell.....Basket Factory.

RIVERDALE.

B. D. Stephens.. ..Brick Works.

ROXBURY.

Geo. T. Gambrill Co.....†Distillery.

SALISBURY.

J. J. Morris.. ..Saw Mill.

E. S. Adkins.....Saw and Planing Mill and Hub Fac.

Salisbury Electric Co.....†Electric-light Plant.

SOUTH BALTIMORE.

Monumental Chemical Co.....New Plant.

TOWSON.

Thomas McKeon.....Saw Mill.

*Reported previously without full particulars as to name or purpose.

†Rebuilt or being rebuilt after being burned.

†Companies or firms in existence prior to December 26, 1891, but since that time have either enlarged their works or built new works, or increased capital. In many of these cases given in this list, reference is made to entirely new works built by old firms.

The Unemployed.

Baltimore is a proverbially safe city, and its business men are nearly always found on the safe side of all business trans-

actions. It is, therefore, not surprising that not a single bank failure was reported in Baltimore as a result of the financial depression that passed over the whole country during the year. The effects of this depression were, however, felt by a number of the manufacturing industries of the city. In a number of these the working force was reduced in some cases one-half, while in others work was suspended entirely for short periods.

In no industry, however, were the effects so much felt as in the clothing trade, especially by those who are employed by "sweaters." These people are of both sexes, and are chiefly Polish and Russian Hebrews. Their compensation, when employed steadily, is but small, notwithstanding the fact that all the members of a family who are qualified for the work are pressed into service. Their standard of living is extremely low, and many families are crowded into tenements which are surrounded by sanitary conditions that ought not for a moment to be tolerated. It is, therefore, not surprising that the most severe effects of any temporary suspension of production should have been felt by this class of people, and it at last became necessary to make a public appeal for alms to prevent actual starvation. This appeal was made by the Garment Makers' Union, and was liberally responded to by the citizens of Baltimore, more especially the Hebrews. A Temporary Relief Association was formed, which received and disbursed the funds collected. Headquarters were opened on East Lombard street, the locality where the most suffering existed, and the rooms were crowded daily by men, women and children seeking the merest necessities of life.

As an indication of the amount of relief given through this agency, the following figures, furnished by the Secretary of the Temporary Relief Association, are herewith given: Cash received from September 21st, to October 20th, \$1,766.09; groceries and clothing, about \$100; number of families daily receiving relief, 190 to 215; average number of persons in a family, 5. The number applying for aid is on the increase, for various reasons, one of which is that suggested by the

secretary, viz.: that those who at first relied on their past savings, having exhausted their funds, have swelled the number already in want. Another reason, which is inseparable from all such schemes of almsgiving, is the fact that there are, under present economic conditions, a number of persons in every large community, who, at first being without work, from no fault of their own, become, through despair, practically charges upon the community. From this class, criminals and public paupers are very largely recruited, and it is this class which will always take advantage of any scheme which may be devised to temporarily relieve the distress of the deserving poor.

Entirely aside from such a class, however, the indications strongly point to an era of considerable deprivation and want during the winter, more especially if it be a severe one. Many workers who have heretofore placed their reliance upon the sum saved in summer to tide them over the winter months, are this year deprived of that resource owing to the dullness consequent upon the business depression.

The great number of public improvements in Baltimore, such as the equipment of street railways with rapid transit facilities, the construction of the Belt tunnel, the work projected by the city, sewers, bridges, &c., have been the means of supporting a large number of laborers. This work has now been to a very great extent completed, and the laborers thus thrown upon the market intensify the struggle for employment.

Many other industries were affected, and though it is impossible, by lack of facilities, to state accurately what proportion of workers was idle, it is not at all extravagant to assume that at least one-third of those usually at work were displaced by reason of the lack of confidence in business circles.

It is most unfortunate that the Bureau could not make a minute investigation into this subject, but it was impossible to do so with the funds at its disposal. It has been compelled, therefore, to rely almost entirely upon statements and reports, which for statistical purposes are totally inadequate.

THE OYSTER INDUSTRY

OF MARYLAND.

BY
CHARLES H. STEVENSON,
(U. S. FISH COMMISSION.)

THE OYSTER INDUSTRY.*

Maryland Ranks First.

Among the fishery industries of the United States the oyster fishery ranks first in importance, and of the States engaging in this fishery, Maryland occupies the most prominent position. The attention given to oyster fishing and oyster cultivation in recent years has been one of the most prominent features of the fishery industry, and has resulted in a great and growing demand for practical literature on the subject, which it has been the aim of the U. S. Commission of Fish and Fisheries to supply.

The present paper is one of a series of special articles relating to the oyster industry which this Commission has issued or has in course of preparation. From a very early period in its history, the Commission has constantly had in view the importance of the oyster as a food product, and has carried on inquiries addressed to the biological, physical, economical and statistical aspects of the industry. The previous reports presented by the Commission are numerous and cover almost every phase of the subject. Among the recently issued papers, the following relating to the Atlantic coast may be mentioned: "Notes on the Oyster Industry of Connecticut," "The Physical and Biological Characteristics of the Natural Oyster-Grounds of South Carolina," and "An Investigation of the Coast Waters of South Carolina with Reference to Oyster-Culture." In addition to the work represented by the foregoing reports, biological and topographical surveys have been conducted in Long Island Sound, Chesapeake Bay, Georgia and Texas, full accounts of which have not yet been printed. The oyster fishery of the west coast has been dealt with in two special papers, "Report upon Certain Investigations Relating to the

*This paper is published by permission of Hon. Marshall McDonald United States Commissioner of Fish and Fisheries.

Planting of Oysters in Southern California," and a "Report of Observations Respecting the Oyster Resources and Oyster Fishery of the Pacific Coast of the United States." For the purpose of instituting comparisons and affording opportunity to apply the methods of cultivation employed in other countries, so far as they may be applicable to the United States, inquiries have also been conducted in all the countries of Europe having oyster fisheries, and two reports based on these studies have been printed, one entitled, "The Present Methods of Oyster-Culture in France," the other, a "Report on the European Methods of Oyster Culture." In the regular descriptive and statistical reports of the Commission relating to the different geographical coast sections of the country, the oyster fishery has also received due notice.

The present paper is a contribution to the economic phase of the oyster industry. It emanates from the Division of Statistics and Methods of the Fisheries of the Commission, and is largely based on the personal observations and inquiries of the author, Mr. Charles H. Stevenson. The report consists of a history of the oyster industry of Maryland from early times, a review of the legislation by which the fishery has been regulated, a description of the oyster grounds of the State, a detailed account of the methods employed in taking oysters, a notice of the progress of oyster culture in Maryland, a history of the State oyster police and of the oyster revenue services, statistical tables showing by counties the extent of the industry in recent years, and a discussion of the transporting, packing and marketing trades.

The extent of the oyster industry of Maryland in the season of 1891-92, as determined by the investigations carried on by this office, may be summarized as follows: The number of persons engaged in various capacities was 33,388. Of these, 10,813 were employed in tonging oysters; 5,059 in dredging, 3,757 in scraping, 1,651 in transporting only, and 12,108 as shore and factory hands. The vessels employed numbered 1,624, the number of boats used was 6,554, the vessels and boats, with their outfit and apparatus, being worth \$2,618,745.

The capital invested in the shore and accessory property devoted to the packing and marketing trades was \$4,650,500. The total investment in the industry was therefore \$7,269,245. The quantity of oysters taken and sold was 11,632,730 bushels, for which the fishermen received \$5,866,120.

Few branches of the American fisheries have been the subject of so much discussion and are so little understood as the oyster industry of the State of Maryland. For fully eighty years this fishery, by reason of its condition and importance, has demanded the attention of the tide-water residents of that State, and at nearly every session of the Maryland General Assembly since 1820 it has been one of the most fruitful subjects for legislative enactments; yet a system of regulation satisfactory either to the oystermen or to the State at large has not been established, and at no previous time in the history of the fishery has it received the amount of attention as at present.

A discussion of this industry is especially interesting, because it is the most extensive and valuable oyster fishery in the world. In European countries and in the majority of the oyster-producing States of America the food market receives the greater portion of its supplies from private grounds, the regulations governing the common or free fisheries being largely subsidiary to the needs of the industry on the private areas. Maryland, however, has persistently refused to encourage an extensive development of private oyster fisheries, devoting instead all its energies toward conserving and protecting the free fishery on the public domain.

Probably no State in the Union has for its area so great an inland water-surface as Maryland. Of the twenty-three counties in this State, the oyster fishery is prosecuted from eleven. in which, because of the innumerable tributaries of the Chesapeake extending into the land, there are few localities removed a greater distance than six miles from navigable water, thus bringing all the residents into close contact with the fisheries. The total population in 1890 of these eleven counties was 219,307, and the oyster industry is by far the principal means

of support. This does not include the city of Baltimore with its extensive dredging, transporting, and marketing interests, giving direct employment to 11,000 persons, and support to many times that number.

The dependence of a large proportion of the citizens of Maryland upon this fishery for a livelihood, and the immense resources it furnishes for the profitable employment of capital and labor, demand that the fullest inquiry be made into its needs and conditions, and should cause everyone interested, either in the welfare of Maryland or the fisheries of America, to be extremely solicitous that no permanent injury to it should be permitted and that every available means be utilized toward maintaining and, if practicable, increasing the productive capacity. Neither is the interest in this industry limited to the State of Maryland, for nearly every locality in America is to some extent dependent for the abundance and cheapness of its oyster supply on the product of the Chesapeake, and this interest is also shared by the foreign consumer of the canned product.

In every region of the world where the oyster industry has assumed any commercial importance, it has passed, or is apparently passing, through the following four stages: First, the natural reefs in their primitive condition, and furnishing the entire supply of oysters; second, those reefs somewhat depleted and producing small oysters, many of which are transplanted to private grounds and under individual protection permitted to mature; third, the public beds so far depleted that the supply available is very irregular and uncertain, and consists almost entirely of small oysters which are transplanted to private areas; fourth, the entire dependence of the industry on areas of ground under individual ownership or protection.

In Europe the greater number of the oyster-producing localities are in the condition of the fourth stage. In America, with apparently a more hardy oyster, the natural advantages greater, and the fisheries not so long continued, the industry still depends largely on the public reefs. But were it not for

the supply of seed oysters obtained from more southern waters, all those States north of Connecticut would be practically in the condition of the fourth stage, the public reefs in that region being almost totally destroyed. Connecticut, New York, New Jersey and Delaware, while obtaining large quantities of small oysters from the Chesapeake and other localities, are rapidly passing from the third to the fourth condition. The oyster industry of Chesapeake Bay, both in Maryland and Virginia, is in the second stage, but the history of the fishery in other States and countries excites grave fears as to its long continuance in this condition.

In Maryland the oyster industry is at present almost totally dependent on the public reefs, and there are two great interests in the fishery, which, for nearly a century, have been antagonistic to each other, viz., the tongmen and the dredgers, with their allies, the scrapemen, and these three unitedly waged common war on the planters. The dispute between the tongmen and dredgers is of economic origin, being due to the improved machinery of the latter surpassing that of their rivals. The common objection to the planters is founded in the belief that their operations constitute an encroachment upon the public appanage, and that the free fishery on the public reefs may thereby be seriously restricted. These class feelings have had much to do with preventing a satisfactory understanding of the fishery and its regulation in a manner acceptable to the State at large.

In studying this fishery in Maryland and comparing its needs and conditions with those of this industry in other localities, consideration must be taken of the enormous extent to which, during the last twenty-five years, it has been prosecuted. The water area of Maryland is the greatest oyster-producing region in the world, and the output of the industry is fully equal in value to one-sixth of the product of all the fisheries of the United States combined, and gives employment to one-fifth of the persons engaged therein.

For purposes of comparison the following tabular statement is submitted, showing either approximately or by latest returns

the catch of oysters from public and private areas in each of the various States of America and the principal foreign oyster-producing countries.

Table showing the Oyster Product of the World.

STATE OR COUNTRY.	No. bushels.	Value.	Year.
Massachusetts	58,007	\$81,938	1892
Rhode Island.....	172,945	241,978	1889
Connecticut	1,940,174	1,426,244	1892
New York.....	2,611,062	2,748,509	1891
New Jersey	2,658,632	1,860,532	1892
Pennsylvania.....	132,380	101,850	1892
Delaware.....	175,332	73,863	1892
Maryland	11,632,730	5,866,120	1892
Virginia.....	5,984,636	2,487,638	1891
North Carolina	807,260	175,567	1890
South Carolina.....	63,150	23,204	1890
Georgia.....	224,355	40,520	1890
Florida	468,431	93,692	1890
Alabama.....	481,070	107,812	1890
Mississippi	806,478	166,672	1890
Louisiana.	841,585	299,896	1890
Texas	440,800	127,990	1890
Washington.....	142,730	127,000	1892
Oregon.....	2,500	3,125	1892
California.....	178,645	698,257	1892
Total for United States.....	29,822,902	\$16,752,407	
Canada.....	152,580	\$183,846	1891
British Isles.....	2,760,000	6,200,000	Approx.
France.	2,000,000	5,000,000	Do.
Holland.	70,000	440,000	Do.
Italy.....	65,000	200,000	Do.
Germany.....	13,000	75,000	Do.
Miscellaneous.....	400,000	600,000	Do.
Total for foreign countries....	5,460,580	\$12,698,846	
Grand total.....	35,283,482	\$29,451,253	

It is thus observed, that the quantity of oysters produced in Maryland, is one-third of the total product of the world, and more than twice as great as that of all foreign countries combined.

The purpose of this paper is to discuss all branches of the oyster industry of Maryland, from the operations of the oystermen to the preparation of the marketable products, the investigation being chiefly from an industrial point of view. Brief but complete notice is taken of the regulations that have surrounded the industry since its inception, as it exhibits the constant efforts made by a people during a period of seventy years to preserve the prosperity of a common fishery. Reference is made for the first time to the planting or bedding operations conducted in the Sinepuxent Bay, and the small business done in this line in other portions of the State. Only the actual and relative conditions of the industry in its various branches are discussed, and no attempt is made to add to the interest or volume of the paper by describing the many unique and novel methods and customs prevalent in certain localities, unless the same have some bearing upon the prosperity of the industry.

The report is largely the result of observations and inquiries made by the writer, as an agent of the U. S. Fish Commission, during extended trips through the tide-water counties of Maryland and of examinations of the voluminous State and county records. Liberal and valuable assistance has been accorded the work by the State and county officials and many other persons in positions to be informed respecting the oyster industry. Especial acknowledgment is made to Gen. Joseph B. Seth, sometime commander of the State fishery force; to Mr. William D. Platt, an extensive oyster dealer of Baltimore; Marion deK. Smith, Esq., Comptroller of the State Treasury; Col. Thomas S. Hodson, and Conway W. Sams, Esq. Acknowledgment is also due Mr. Daniel Bendann, of Baltimore, for the use of his excellent series of photographs illustrating the various phases of the oyster industry of Maryland.

General Historical Notes.

In order that the present condition of the oyster industry of this State may be properly presented and understood, it is necessary to review its conditions and methods of prosecution

in former years. There have been three great eras in the history of the oyster industry in Maryland, viz: First, from the settlement of the State to 1820, during which the fishery was in its infancy, subject to no restrictions or regulations whatever except those of nature and market demands, the product being very small; second, from 1821 to 1864, during which the use of dredges in catching oysters was interdicted and the wholesale shucking trade was established and considerably developed; third, from 1865 to the present date, in which a license system has been operative, authorizing the use of tongs, dredges and scrapes, under certain regulations, the places and times of their employment being restricted.

Prior to 1820.

The heaps of oyster shells found in some places along the shores of the Chesapeake, indicate that these mollusks had for a long time been utilized for food purposes by the Indians; and the writings of the early settlers of and travelers to this part of the country make reference to the fact that the aborigines at times furnished them with oysters in exchange for trinkets and other commodities. The Chesapeake colonists appear to have given little attention to them. An explanation for this is probably found in John Smith's "Advertisements for Unexperienced Planters," published in 1631, in which he explains the reasons why the early settlers of the Chesapeake did not engage in fishing, by stating: "Now although there be * * * Fish in the rivers * * *, yet the rivers are so broad * * * and we so unskillful to catch them we little trouble them nor they us."

There are many reasons for the belief that, for years after the settlement of Maryland, oysters were regarded as of little value for food purposes. Diligent search among the early colonial records has resulted in the finding of but one reference to this product. This reference, which is certainly depreciatory, occurs in the depositions made in the famous Claiborne suit of about 1680, in which the "Kent Islanders" cited, among their grievances and the hardships which they had to

endure, that their supply of provisions becoming exhausted, it was necessary for them, in order to keep from starvation, to eat the oysters taken from along the shores.

As no further mention of them is found among the voluminous colonial papers, it is reasonable to suppose that after the settlement of Maryland, a long time elapsed before oysters entered largely into the food supplies of the inhabitants; hence there was little object in catching them. During the war of 1812, occasional reference was made in the newspapers of that period to the part played by the oystermen of the Chesapeake in harassing the British fleet in the bay, from which it is evident that at that time the fishery was of some consequence.

It appears from records and traditions that a large portion, if not the greater quantity, of the oysters then caught were transported by vessels to Northern markets, a considerable demand for them having been developed in the New England States; and, beginning about 1808, a number of vessels each season transported several cargoes to Fair Haven, Conn. The vessels resorted to the reefs situated in the lower part of the bay, and obtained cargoes either by dredging or by purchasing from the tongmen living along the shores, who oystered especially for those vessels. It was by the transporters that the use of dredges was largely extended in Maryland waters, this being to some extent necessary for the transportation trade, when the State of Virginia, by Act dated January 9, 1811, (Laws, Va., 1810-11, ch. xvii,) interdicted the use of these implements within the waters of that State. No wholesale markets existed along the shores of the Chesapeake for the handling of oysters, and it is probable that the local consumption was very small.

From 1820 to 1864.

The quantity of oysters for the Northern markets, while not large, in view of the present knowledge regarding the productiveness of these reefs, was sufficient to alarm the oystermen of that time lest their industry should thereby become totally destroyed. These apprehensions resulted, in 1820 (L. 1820-21, ch. 24), in the earliest enactment of the General Assembly

of Maryland regulating or affecting the oyster industry, the annual product of the State at that time scarcely exceeding, if it equaled, 500,000 bushels. Because of the insight it offers into the fishery as it then existed, the preamble to this enactment is here given :

Whereas it is represented to the General Assembly, that a great number of large vessels from the Northern and Middle States, frequent our waters for the purpose of transporting oysters to those States; and whereas well-grounded apprehensions are entertained of the utter extinction of oysters in the State, as well as in consequence of the immense quantity thereof exported, as the destructive implements used in catching them : Therefore, etc.

This enactment prohibited, under penalty of a fine of \$20 or sixty days' imprisonment, the use of any implements in catching oysters within the State other than the ordinary tongs, and also the transportation of oysters out of the State in vessels not owned wholly for the preceding twelve months by a citizen of the State, or placing oysters on any such vessel to be transported. Because of the great expanse of water territory, and the difficulty of enforcing the law without competent physical force upon the bay, this enactment did not fully prevent the continuation of the trade by Northern vessels.

During the next session of the General Assembly, an exception was made (L. 1821-22, ch. 107) to the law of 1820, and permission was given to each citizen of the State of Delaware, living within three miles of the northeast branch of the Nanticoke river, to catch oysters from that branch of said river in quantities not exceeding thirty bushels per day; a privilege which they enjoyed for many years and to which may be due in some respects the extensive oyster-shucking trade now prosecuted at Seaford. This is one of the very few instances in which a State has, by legislative enactment, authorized non-residents to take fishery products from within its borders.

On February 16, 1830 (L. 1829-30, ch. 87), an important enactment was made embodying almost the first oyster-planting law operative in America. This act authorized citizens of the

State to pre-empt, under certain regulations, an acre of ground naturally unproductive of oysters, for the purpose of planting and growing oysters and other shellfish thereon. It also granted to the owner of lands bordering a creek less than 100 yards in width at its mouth, the exclusive right to the use of the same for a similar purpose. The productiveness of the natural reefs having apparently continued to decrease since the enactment of 1820, this act further interdicted the use of tongs having more than six teeth on a side; but this restriction, so far as it applied to the waters of the Eastern Shore, was repealed at the same session of the Legislature, the prohibition of their use on the Western Shore remaining until 1834. The act also provided that no persons other than citizens of the county or counties bordering on any river or bay, should catch oysters within 300 yards of low-water mark of either shore of said river or bay. In this provision originated the distinction between "county waters" and "State waters," the latter being such areas as are open for the use of any resident of the State—a distinction which, though modified and changed to a considerable extent, has remained to the present day.

Some difficulty was experienced in enforcing this enactment, and at the next legislative session (L. 1831–32, ch. 249) more easily applied penalties and court regulations were provided for its enforcement in the waters of the Eastern Shore, and in the following year the same provisions were applied to the Western Shore (L. 1832–33, ch. 265). The necessity for these provisions was intimated in the preamble to the first one, as follows:

Whereas the protection of oysters in the waters of this State is a subject in which the citizens thereof are deeply concerned, and the Legislature of Maryland by sundry laws passed for that purpose have sought to secure the advantages resulting from that article of trade, which have fallen short of the object they were designed to accomplish; and

Whereas the citizens of this and other States infesting said waters have continued to take and carry away oysters in violation of the laws upon this subject enacted; and it is justly

apprehended that oysters in the waters of the State will be destroyed, not less by the immense number carried away, than by the destructive implements used in taking them; and

Whereas the navigation of many creeks has been obstructed by the citizens of this and other States by means of the heaps of the refuse thrown into the waters of said creeks in the process of picking [culling] the oysters for market, to the great injury of the good people of this State, * * *

During the twenty-four years following 1830, few important changes were made in the regulations of the fishery, but it was an era of great development in the extent of the industry. The opposition to the transportation of oysters out of the State, and the cost of doing so when that opposition was overcome, induced a number of oyster marketmen from New England to establish shucking houses in Baltimore for shipment of the Chesapeake stock throughout the country, and the increased demand naturally led to an extension of the fishery. The first of these houses was established in 1836 and others were started within a few years.

In 1840, it was estimated that the quantity of oysters used by the shucking trade during the previous season amounted to 710,000 bushels, and there was a large additional quantity consumed along the shores. During the years immediately following 1840, many of the large reefs in the Tangier region were discovered, resulting in a greater development of the fishery in that section. About 1846, the canning of oysters was begun, and the extension of this branch of the trade rapidly increased the demand for the product of the reefs.

In the meanwhile, however, additional restrictions were placed on the fishery, of which the following were the most important. In 1836 (L. 1835-36, ch. 216 and ch. 260) the catching or burning of oysters for purposes of fertilizing land was prohibited in portions of Dorchester and St. Mary's counties, and in 1840 (L. 1839-40, ch. 103) the same practice was prohibited in Somerset county. By act of 1837-38, ch. 310, it was made unlawful for any person other than residents of the counties bordering on the same to catch oysters within

500 yards of low-water mark in any waters of the State, and in cases in which a creek or river is the divisional line between two counties, the privilege of taking oysters therefrom belonged to the residents of those counties in common and to none others. By act of 1845-46, ch. 240, the catching of oysters in the waters of Worcester county between April 13 and September 1 of any year was interdicted, this being the first close season operative in Maryland and one of the earliest in America.

In 1852 (ch. 57) the removal of empty shells from any oyster reefs in Worcester county for any purpose whatever was prohibited. These shells were generally manufactured into lime. The quantity of small oysters and shells used from 1810 to 1860 for fertilizing purposes, after being burned, or without that treatment, is surprisingly large. The oysters, together with the empty shells and debris, or the "run of the rock," could be purchased in large quantities for two to four cents per bushel, a tongman being able to catch from forty to one hundred bushels per day. The stock was of the same grade as now sells for ten to twenty cents per bushel for planting purposes. The lime was worth from three to eight cents per bushel, and was spread over the land sometimes as plentifully as seventy-five or one hundred bushels to the acre. By this method of treatment large areas of land that produced nothing but June grass were made very productive by further cultivation. The use of oysters for this purpose continued in some localities of Maryland even as late as 1875, and it is stated on reliable authority that in 1873 oysters were sold at two cents per bushel in Talbot county for this purpose.

In 1854 (L. 1854, ch. 4), a material change was effected in the fishery, and the use of the reefs of the State by the tongmen exclusively was modified by it being made lawful for citizens of Somerset county to take oysters with small dredges or scrapes in any of the waters of that county not part of a creek, and not within 200 yards of the shore, and not less than twenty-one feet deep. Before engaging in scraping (as this form of oystering, when prosecuted within the limits of a

county, is now designated) each vessel was required to obtain a license at a cost of \$15, the revenue derived therefrom being applied to the school fund of the county. This was the first oyster license law operative in Maryland, and almost the first in America.

The military operations in Maryland and Virginia from 1861 to 1865, and the consequent disorganization of the oyster trade, put a temporary check on the advance of the fishery. But the market demand for oysters increased, being due largely to the extension of the canning trade during that period, and consequently the prices ruled high, the average received by the oystermen in 1863-64 and 1864-65 being about seventy cents per bushel. This resulted in great prosperity to those fishermen who were successful in continuing their operations.

From 1865 to 1893.

This period practically covers the time in which the industry has been of great extent and importance. The discontent among the oystermen of other counties at the special privilege enjoyed by the residents of Somerset under the Act of 1854 (ch. 4), the high rate at which oysters were selling by reason of the recent military operations, and the fact that (by means of tongs) oysters in depths of water greater than 23 feet could not readily be obtained, together with the great difficulty in enforcing the law then existing, led in 1865 (ch. 181) to a repeal of the entire body of the general law affecting the oyster industry and the enactment of another in lieu thereof, the general features of which have remained to the present time.

The principal changes effected by the new law were as follows: It required that no person should engage in catching oysters within the waters of the State for purposes of sale with any implement whatever, without first having obtained an annual license for the boat or vessel employed. For every boat engaged in tonging, the owner thereof was required to pay a license fee of \$5. The fee for dredging was at the rate

of \$5 for each ton of measurement of the vessel employed, and the use of dredges was authorized only from September 1st to June 1st, and within specified portions of the Chesapeake Bay. All license fees were to be paid into the State treasury, and no steamboat or steam machinery was permitted to be used in catching oysters.

The scraping law previously operative in Somerset county was not affected by this enactment. The principal change effected in the provision of law authorizing the pre-emption of ground for the purpose of planting oysters or other shellfish, was in increasing the limit of area obtainable by each individual owning land along the foreshores from one to five acres. No provision was made for the pre-emption of planting lots by other persons, but this was remedied two years later. The procedures for the enforcement of the law and the penalties for violations were fully defined. Among the former may be mentioned the granting of full powers of sheriff in enforcing the law to all persons employed on licensed vessels.

During the first season in which the license system was operative, 1865-66, the number of tonging boats licensed was 1,658, and of dredging vessels and boats 391. In that season, according to data furnished by the late Mr. C. S. Maltby, the catch by tongs amounted to 1,216,375 bushels, and by dredges and scrapes, 3,663,125 bushels, making a total of 4,879,500 bushels.

Since the license enactment of 1865, frequent changes have been made in the times, places and methods in which the various branches of the fishery might be prosecuted, as well as in the amount of license fees required to be paid; but detailed reference to these changes will be found in the discussion of the various branches of the oyster industry.

The difficulty experienced in compelling some of the dredgers to obtain licenses and in preventing them from operating on interdicted areas, led, in 1868, to the organization of the State fishery force, consisting of a number of vessels, suitably armed and equipped with officers and men, to patrol the bay

and tributaries in search of violators of the oyster law and to arrest the same when found. The act providing for this force also prohibited the catching of oysters on Sunday, and in 1870 (ch. 364), the taking of oysters at night—that is, between sunset and sunrise—was also interdicted. But it was for many years difficult to prohibit this practice.

In 1870 the use of scrapes was authorized, under very restricted conditions, in certain waters on the southern shore of Dorchester county, and in 1874 they were permitted on the northern shore of that county and in certain waters of Talbot county.

By act of 1872 (ch. 131) an exception was made to the general license system of the State, and residents of Worcester county were exempted from its provisions; but in 1874 (ch. 77) the tongmen in that county were again required to obtain license, each man paying \$3 therefor, the revenue thereby derived to be devoted to the purchase of seed oysters, to be planted in Sinepuxent bay. In the last-named year (L. 1874, ch. 181) the first general close season on tonging was established, the exempted time being from May 1 to September 1.

During several seasons following 1870 the catch of oysters ranged between 9,000,000 and 14,000,000 bushels. But from 1876 until 1881 the fishery was not so prosperous, either as regards the number of persons employed or the quantity and value of the products, the latter amounting in 1879–80 to 10,600,000 bushels, valued at \$3,869,000.

From 1882 until 1886 the fishery again increased largely in extent; but less prosperous years following led, in 1890 (ch. 602), to the adoption of the famous “cull law,” which is generally admitted to be one of the best protective measures ever enacted, if properly enforced. Although cull laws have prevailed in portions of Europe, notably the English Channel, almost continuously since 1839, this has never been a popular protective measure in America, and in only one or two States is a provision of this kind operative, Maryland being almost the first to attempt the enforcement of such a regulation;

indeed, restrictions as to the size of the oysters to be taken are not now very popular abroad. The reason for this is that in most of the other American States that have given attention to the oyster industry, as well as in the oyster-producing countries of Europe, the present regulations of the common fishery are auxiliary to the needs of the private or several fisheries, and the public-reef fishermen make no complaint, for they are thus enabled to market their small oysters among the planters.

As even the smallest oysters caught in Maryland could be utilized in the steaming houses of that State, or sold for bedding in other localities, the fishermen found a market for all they took from the water and did not attempt to carefully cull and return the small ones to the beds to increase in size for another season. A one and one-half inch cull law had been enacted in 1886 (ch. 569) for the waters of Somerset County, but the difficulty in enforcing a local law of this nature rendered it almost inoperative. The general cull law as operative at present is as follows:

All oysters taken from any of the waters of this State (either with scoops, dredges, or any similar instruments, or tongs or rakes) shall be culled upon their natural bed or bar as taken, and all oyster shells, and oysters whose shells measure less than two and one-half inches in length, measuring from hinge to mouth, shall be included in said culling and replaced upon said bed or bar as taken.

This regulation required such a change in the practices of the oystermen who had been accustomed to market oysters of all sizes, that it was at first regarded as a great hardship, and much difficulty was experienced in its enforcement, notwithstanding the fact that everyone recognized its value. In a letter to the Maryland Board of Public Works, which controls the State fishery force, the commander of that force wrote, under date of December 31, 1890, in reference to the cull law, as follows:

At the last session of the Legislature, a bill was prepared and introduced, under the direction of the Governor, which

provided for a system of culling, so as to have the young oysters left on the bars to furnish seed for a future supply, and this Act is now about the only law which tends at all to relieve the bars from complete destruction. But the bill had a rider put upon it in the shape of an amendment, that has about broken it down. The amendment provides for the ascertainment of the quantity of marketable oysters in a cargo, by dumping one bushel in every fifty, and in the end culling this "dump," finding the percentage of shells and small oysters, and deducting this percentage from the full cargo. This percentage is never taken out; but, on the contrary, goes into the bins of the packers as so much clear gain to them. By this section, the packers are in position of greatest benefit when the oysters are not culled, as they get all the culls free, and these have, in some instances, amounted to 300 bushels in a cargo of 1,200 bushels. I find all classes to agree with me in saying that the cull law should be vigorously enforced, and all as unanimous in both violating it and trying to screen violators from arrest by the fishery force.

An attempt was made by Act of 1892, (ch. 278,) to remedy the defects in the regulation of this provision, and, as it can be effectively enforced only at the oyster markets, provision was made for the appointment by the Governor, of one Inspector at each of the wholesale ports, whose duty it is to properly enforce the cull law in his respective district. Their compensation, limited to \$600 per annum, was to be derived from the imposition of a tax of one tenth of one cent per bushel on all oysters purchased by every wholesale or retail dealer. Many of the dealers, however, refused to pay this tax, alleging that it is irregular, and only about \$2,500 was paid in 1892-93, notwithstanding the fact that 10,000,000 bushels of oysters were handled. But each year the cull law is becoming more popular and better observed, and it is now recognized as of more value as a protection to the common fishery than any other, if not all other oyster regulations of this State.

The total oyster product of Maryland during the present century, not including such as have been used for lime, etc., or those caught by citizens of other States, has probably amounted to about 395,000,000 bushels, for which the oyster-

men have received about \$125,000,000, but the value of which after passing through the hands of the marketmen, transportation agencies, etc., has probably been \$250,000,000 or more, over four times as great as the total present valuation of taxable property in all the counties from which the fishery is prosecuted, not including the city of Baltimore.

The largest catch during any one season was probably made in 1884-85, in which, according to the best estimates, the quantity obtained amounted to about 15,000,000 bushels. This large product was due to an excellent set obtained in 1883, the reefs in nearly all portions of the State being abundantly supplied. Judging from the records of a few oystermen and marketmen and from the number of men at work, as indicated by the license lists, there is reason to believe that the catch in 1874-75 was but little less than that of 1884-85, and, as the number of men oystering during that season was considerably less, the average catch per man was, of course, very much greater than in 1884-85.

During the seasons 1885-86 and 1888-89 large catches were made, probably falling little short of the foregoing. The season 1890-91 showed a large decrease in the quantity of oysters taken, the dredging fleet suffering most. The oysters were scarce and the prices high, the profits to both oystermen and marketmen being small. The decrease may have been to some extent due to the destruction effected by the great freshets in 1889. Those beds near the mouths of rivers draining large areas, are reported as having exhibited the greatest depletion. The Virginia reefs were in fairly good condition, so that, taking the high prices into consideration, the oystermen of that State reported it as being one of the most profitable seasons they had enjoyed for many years.

In 1891-92 the yield in Maryland was much better, the catch being 11,632,730 bushels, an increase of nearly 1,700,000 over the preceding season. This increased production was generally attributed to the effects of the cull law adopted in 1890 and the gradual recovery of the reefs from the destruction effected by the freshets of 1889.

In 1892-93, except that the dredging fleet again fared badly, the fishery seemed to be in much the same condition as during the previous season. The oysters were larger and fatter, but scarce. Up to December 31st the receipts at Baltimore were 3,022,170 bushels, as against 3,013,600 bushels in 1891-92 and 2,349,140 bushels in 1890-91. During January and February unusually cold weather prevailed in the Chesapeake region and the oyster fishery was almost stopped thereby. Thousands of boats and vessels were "frozen up" in the harbors and nearly all the shucking-houses were idle. The price for oysters in Baltimore ran up to \$1.50 per bushel, this being higher than was ever before known at that port for standard-grade oysters. But as soon as the freeze was over, the oystermen went to work, and the season closed with a total catch of about 10,142,500 bushels, 1,490,230 bushels less than that of the preceding season.

The Oyster Grounds.

By numerous acts of the General Assembly, the tidal water areas of Maryland have been divided into two classes, viz., those situated within the small bays, sounds, rivers and creeks, and known as the inshore or "county waters," and those areas located in the Chesapeake bay and Potomac river outside of the smaller bays and rivers and designated in this report the "State waters." Of the 2,359 square miles* of tidal-water area of Maryland, 1,025 are situated within the limits of the counties, 976 in the Chesapeake bay, and the remaining 358 square miles in the Potomac river, thus giving the "county waters" an area of 1,025 and the "State waters" 1,334 square miles.

The distinction between "county waters" and "State waters" is of much importance to those persons desirous of understanding the condition of affairs in Maryland, not only because different methods of oystering are prosecuted in each, but also because persons are not permitted to oyster in the waters of

* All miles referred to in this report are statute miles, unless otherwise indicated.

a county unless they are residents of that county, while citizens of any portion of the State may resort to the State grounds. The counties, however, have no title to the water area situated within their limits that would prevail against the State.

Tonging, dredging and scraping constitute the various methods of catching oysters practiced in Maryland. Excepting a few reserved areas of small extent on which no form of oyster-fishery is permitted, tonging is authorized under certain restrictions and regulations as to persons, times, and methods in all Maryland waters. Dredging is permitted in the "State waters" only, and the use of a few shoal reefs located therein is reserved from the dredgers for the use of the tongmen. Scraping, which is a modified form of dredging, is authorized only in portions of the waters of Somerset, Dorchester and Talbot counties.

Thus, of the 1,334 square miles of "State waters," 35, containing some of the best oyster reefs, are reserved for the tongmen, leaving 1,299 for the dredgers. And of the 1,025 square miles of "county waters," 748 are reserved for the tongmen and 277 may be used by both tongmen and scrapemen. While the men using tongs are permitted under certain regulations to work on all the reefs in the State, yet the other methods of catching oysters are so much more successful that in most localities the permit is scarcely a privilege, and generally tongs are used only on reefs where dredges and scrapes may not be employed.

The location of the boundary lines separating the "State waters" from the "county waters" has occupied much of the time of the general assembly and of the courts of the State. The distinction between these waters originated in an act of 1830 (L. 1829-30, ch. 87), which prohibited citizens of one county from catching oysters within 300 yards of low-water mark of either shore of any river or bay situated within the limits of another county. The original distinction has been repeatedly modified and amended since then, both by general and local enactments, but it would require too much space to give here a history of the location of these boundaries.

Tidal-water area of Maryland and area on which each form of fishery is authorized.

LOCALITIES.	Tonging.	Scraping.	Dredging.	Total.	Land area.
<i>County waters.</i>	<i>Sq. miles.</i>	<i>Sq. miles.</i>	<i>Sq. miles</i>	<i>Sq. miles.</i>	<i>Sq. miles.</i>
Somerset	71	112	.....	183	365
Wicomico.....	19	.....	.....	19	369
Dorchester.....	89	118	.....	207	610
*Talbot.....	73	47	.....	120	285
Queen Anne's....	64	.....	.....	64	352
Kent	50	.....	.....	50	315
Cecil	38	.....	.....	38	375
Harford	35	.....	.....	35	422
Baltimore....	46	.....	.....	46	650
Anne Arundel....	58	.....	.....	58	400
Calvert.....	29	.....	.....	29	218
St. Mary's.....	54	.....	.....	54	360
Charles.....	21	.....	.....	21	460
Worcester	101	.....	.....	101	475
Total.....	748	277	.....	1,025	5,656
<i>State waters.</i>					
Chesapeake Bay...	35	.....	941	976	.....
Potomac River....	.....	.....	358	358	.....
Total.....	35	.....	1,299	1,334	.....
Grand total.....	783	277	1,299	2,359	5,656

The above table exhibits in detail the tidal-water area of the State, and the area on which each form of fishery may be prosecuted, the unit of measurement being the square statute

* Prior to November, 1893, the scrapemen licensed to oyster in the waters of Talbot county claimed and exercised a right in common with the dredgers licensed by the State to catch oysters lying along the west side of Talbot county, between Black Walnut Point and Tilghman's Point, and extending to the middle of Chesapeake Bay and Eastern Bay along said line, excepting the waters in Poplar Island Narrows reserved for the tongmen. A decision of the Circuit Court for Anne Arundel county, made in October, 1893, restricts them, however, to the waters lying between Wade's Point and Tilghman's Point. An appeal has been taken to the Court of Appeals, in which the decision of the Anne Arundel court will be reviewed. In the above table the conditions prevailing at the present time have been considered.

mile. As tonging is authorized in all waters of the State, only such areas are given under that caption as are exclusively reserved for that form of fishery. For purposes of comparison the land area of each of the fourteen tide-water counties is noted in the last column.

Natural Reefs.

In the general acceptance of the term, natural oyster-ground is a place where oysters grow without special assistance from man and in sufficiently large quantities to induce the public to resort there for a living, but not a place where oysters have not during a term of years, usually accepted as ten, occurred in sufficient quantities to make it profitable to catch them, although they may there be planted and grown. The reason for so long a period of years, is that occasionally, because of the fatalities of nature or on account of overfishing, certain areas may for several years be so impoverished that they can not be profitably worked, yet after a period of time they may, by the operations of nature, recover their former productiveness.

The locations of oyster reefs are determined by physical conditions—the salinity of the water, the character of the bottom, and the food resources, all exercising important influences in qualifying a locality for the growth of these mollusks. In four-fifths of the water area of Maryland the salinity of the water and the food resources are adapted to the growth of oysters, but under natural conditions only a portion of the bottom of this area is suitable to sustain them. Hence, in this State, the condition of the bottom is a more prominent factor in determining the adaptability of a locality to the support of oyster beds than the saline constituents of the water.

The oyster reefs at present existing in Maryland, occur mainly on the sides of the channels in the Chesapeake Bay, as well as its tributaries, and extend usually in the direction of the current. They are in greatest abundance at the mouths of estuaries, and in places where there are sudden changes in the depth of bottom, but are found in all depths of water, from a

few inches to fifteen or more fathoms, and most plentifully where the depth is from five to thirty feet. The reefs extend in the Chesapeake Bay, from the Virginia State Line to Worton Point in Kent County, a distance of 110 miles; in the Potomac River, from the mouth thereof to Maryland Point, in Charles County, a distance of sixty-five miles, and in the tributary bays and rivers as far up as salt water flows.

There are probably some oyster reefs in Maryland not yet known. The oystermen have no time to spend in search for them, and discoveries are made only by chance. Some of the known beds are not generally fished on, either because the oysters are too small, too much scattered, or because other and more accessible reefs produce the necessary supplies. Sometimes for a year or more a prominent reef is left almost untouched. Rarely in recent years have any of the oystermen resorted to the reefs situated about Pool Island and north of Swan Point. The large reefs lying off Smith Island and Kedges Strait were not generally worked prior to 1880. Many localities in Maryland which were formerly productive are now barren; on the contrary many places but recently barren are now producing in abundance. It was formerly stated that the Baltimore dredgers did "not know the way down the bay" in pleasantly referring to their obtaining the greater portion of their oysters above the Choptank river, while now the catch is obtained mostly from below that point.

It has been frequently stated in newspapers and other publications, that the oyster beds of Maryland are practically exhausted. The product during the last few years does not indicate that this is the case, nor do the beds appear to be in extreme danger of soon becoming exhausted. It is astonishing that they have for many years yielded so abundantly, and yet are in such good condition as at present. Nevertheless the reefs are undoubtedly being fished to their fullest productive capacity under present regulations, excepting possibly those situated in tonging areas, but too deep for utilization by those implements. Compared with the condition of thirty-five years ago the area of the reefs has been very largely increased,

but because of the very vigorous fishery to which they have been subjected the size of the oysters brought to market is less and the number left on the beds at the end of each season has very materially diminished.

Occasional references are made to the former abundance of oysters around and even above Pool Island, where few are now caught, and to their occurring at the mouth of the Susquehanna River, where no oysters are now known to exist, as well as in many other places in the Chesapeake and tributaries, and their disappearance is popularly attributed to the extensive and vigorous fishery prosecuted in those waters. But the true cause for the greater part of this destruction is probably the changes in the quantity of fresh water flowing into the bay and the increased volume of the spring freshets. Forty years and more ago, the farms along the tributaries of the Chesapeake were not so thoroughly cultivated as they are now, and the river and creek bottom lands were covered with timber. The more thorough cultivation of the farms, with the attendant system of ditching practiced in this section of the country and the clearing away of the timber, has caused a more rapid flow of the rain water and melted snow into the rivers and bays, which at times during the spring has freshened the water to a point beyond the endurance of the oysters. This is but one of the many adverse agencies with which oysters have to contend.

No complete survey has yet been made of the oyster reefs of the State of Maryland, in the absence of which the general understanding of the fishery can not be otherwise than imperfect and unsatisfactory and very erroneous impressions prevail as to the extent, location, and condition of these reefs. In the attempt to supply to some extent this much-needed information, the writer, with the assistance of many persons engaged in the various branches of the oyster fishery and the able co-operation of Gen. Joseph B. Seth, sometime commander of the State fishery force, has ventured to approximate the area of the reefs known at present and to map their general location, the result of this work appearing in an appended table.

The total area of natural oyster-ground as developed by this review approximates 355 square miles, 144 being situated in "State waters" and 211 square miles within "county waters;" but the total area covered with compact reefs probably does not exceed 135 square miles, the remaining part being more or less covered with scattered oysters.

In 1870 Mr. Hunter Davidson, then in command of the fishery force of the State, estimated the area of the natural oyster-ground to be 373 square miles. It must not be understood, however, because the present approximation is eighteen square miles less than that made twenty-three years ago, that a decrease in the area of the reefs has actually occurred, for the contrary is probably the case, and the apparent error is either in one of the estimates or because he adopted a different definition for natural beds than that herein accepted. Persons familiar with the difficulties encountered in the survey of natural oyster-grounds can readily understand why these estimates should differ, if the same definition of natural oyster-grounds has been accepted. It is extremely difficult and almost impracticable to determine definitely and with accuracy the outlines and limits of the beds when the oysters are much scattered, as they frequently are on the outside borders of the bed, and arbitrary limits must be adopted. Should two thoroughly impartial and careful surveys be made, with suitable instruments, but a year apart, it is quite possible and even probable that a greater discrepancy would exist between them than is found in the present instance.

The Maryland oyster commission of 1884 approximated the area of the natural oyster-grounds at 193 square miles, not including the area situated within the Potomac river. But in their approximation the area in the Pocomoke and Tangier sound regions was estimated at twenty-eight square miles, notwithstanding the fact that a careful survey of those grounds made in 1878 and 1879 by the U. S. Coast and Geodetic Survey disclosed the area to be at least eighty-five square (statute) miles. If this change be made in the figures for the Tangier and Pocomoke regions and the area of the beds in the

Pocomoke river be added, it will give, according to the estimates of the Maryland commission, nearly 300 square miles as the area of the natural oyster-grounds of the State.

The following table exhibits in detail, according to the present approximation, the area in square miles of the natural oyster-ground and the area in which each form of fishery may be prosecuted. * As tonging is authorized on all the natural reefs in the State, only such area is here presented under that caption as is exclusively reserved for that form of fishery.

Natural oyster reefs of Maryland and area on which each form of fishery is authorized.

LOCALITIES.	Tonging.	Scraping.	Dredging.	Total.
<i>County waters.</i>	<i>Sq. miles.</i>	<i>Sq. miles.</i>	<i>Sq. miles.</i>	<i>Sq. miles.</i>
Somerset.....	20	39	.....	59
Wicomico.....	4	.....	.....	4
Dorchester.....	22	26	.....	48
Talbot.....	21	15	.....	36
Queen Anne's.....	18	.....	.....	18
Kent.....	10	.....	.....	10
Anne Arundel.....	14	.....	.....	14
Calvert.....	6	.....	.....	6
St. Mary's.....	11	.....	.....	11
Charles.....	2	.....	.....	2
Worcester.....	3	.....	.....	3
Total....	131	80	.....	211
<i>State waters.</i>				
Chesapeake Bay.....	23	.....	79	102
Potomac River.....	.....	.....	42	42
Total.....	23	.....	121	144
Grand total.....	154	80	121	355

The percentage of natural beds in both the tonging and dredging areas is very much reduced by there being several hundred square miles of area in each in which the salinity of the water is not adapted to the growth of oysters. As scraping is authorized only in three of the most productive estu-

aries the percentage is naturally much higher than where the other forms of fishery are prosecuted.

No data are at hand to exhibit the extent to which these beds are at present stocked with oysters. The method by which information of this nature has usually been obtained, has been to dredge over the reefs and compare the number of oysters secured with the area over which the dredge has passed. It is not a satisfactory process, the quantity of oysters obtained thereby fluctuating according to the condition of the weather and bottom, the form and speed of the vessel, length of drag rope, construction and general manipulation of the dredge, and the ability and conscientious accuracy of the person conducting the examination; and under no circumstances does the dredge catch all the oysters in its path.

The report of the Maryland oyster commission of 1884 indicated, as a result of their examinations in 1882, an average of 0.267 oysters to the square yard. But the catch during the following season is generally admitted to have amounted to at least 8,000,000 bushels or 2,000,000,000 oysters, an average of 1.89 oysters to the square yard, or, according to the area of reefs as reported by that commission, (193 miles,) an average of 3.34. Probably less than 50 per cent. of the number of oysters on the bed were caught during that season, indicating an average of at least 3.78 (or 6.68, if the area as reported by the Maryland commission be accepted) to the square yard. No recent examinations have been made for the entire bay to discover the number of oysters on the beds.

While this is an excellent method for learning the prospects of a good fishery during the ensuing season, yet the number of oysters on the reefs is so dependent upon seasonal conditions and the attachment of "sets" during the two preceding summers that unless the examination be continued over a period of years it is not of great value for determining the condition of the industry.

A very large portion of the oyster reefs in Maryland are situated on the Eastern Shore in the four great indentations,

Tangier region, Choptank River, Eastern Bay and Chester River. On the Western Shore, the prominent oyster localities are the Potomac and Patuxent Rivers, and the "Western Shore Bay Grounds," or those on the western bank of the Chesapeake from Pool Island to Point Lookout, including the Anne Arundel Shore. The "Eastern Shore Bay Grounds," which occur on the eastern bank of the Chesapeake, and the Sinepuxent or Chincoteague Bay Grounds, located within the waters of Worcester County, complete the enumeration of the oyster-producing regions of the State.

These localities differ in physical characteristics and produce oysters in some respects peculiar to themselves, which are readily recognized in the markets and command varying prices; and while all, excepting the last named, are under the same general laws and regulations, certain local regulations affect each and the industry in each differs to some extent from that of the others.

Tangier and Pocomoke Regions.

Because of their having been resorted to more extensively and for a greater length of time, the oyster reefs of Tangier and Pocomoke sounds are better known than those of any other part of the State. It was there that dredges were first extensively used in Maryland, which, according to the most reliable accounts, was about the beginning of the present century. And after the interdiction of that form of oystering in Maryland in 1820 the use of those implements was permitted in a large portion of those sounds eleven years before they were authorized in the "State waters."

Tangier Sound extends north and south from the head of Fishing bay to Watts Island, a distance of forty miles, but only thirty-two miles of its length are situated within Maryland limits. Including its tributaries, Annemessex, Manokin, Wicomico, Nanticoke, and smaller streams, and all the "county waters" on the southern shore of Dorchester county, as well as the tributary channels, it covers within Maryland limits an area approximating 300 square miles, all of which is situated

within the limits of Somerset, Wicomico and Dorchester counties. The greatest recorded depth of waters is seventeen fathoms. In the channel it averages nine fathoms and on the oyster beds it ranges from three to forty feet.

Almost throughout its length each side of the channel is lined with oyster reefs of greater or less extent. These reefs, somewhat scattered, extend through Hooper, Holland and Kedges straits, and between Smith and Tangier islands, as well as up the tributaries as far as the salinity of the water will permit. The area of the natural oyster-grounds in the Tangier region, including all the "county waters" on the southern shore of Dorchester, approximates eighty-four square miles, and the average annual product during the last five seasons was 3,400,000 bushels, valued at \$1,625,000, this being an average of 40,476 bushels and \$19,345 to the square mile. It is probable that fully three-fourths of this catch is obtained from the "solid reefs," which scarcely exceed thirty-five square miles in area, making an average product for that area of 72,857 bushels and \$34,821 per square mile. From the origin of the fishery to the present time the total product of some areas situated in this region, has doubtless exceeded 3,000,000 bushels of oysters to the square mile.

The Tangier oysters are ranked among the best obtained in Maryland. The shells are round and deep, but frequently exhibit the effects of the boring sponges. The oysters are usually fat, and many of them are marketed at fancy prices. The average size of those brought to market, however, is very much less than it was twenty years ago.

Scraping is authorized in the open waters of this region within portions of Somerset and Dorchester counties, while the tributaries are reserved for the use of the tongmen. The area used by the scrapemen approximates 198 square miles, and that reserved for the tongmen 102 square miles.

The Pocomoke Sound oysters differ little from those of Tangier Sound. Prior to the establishment of the boundary line between Maryland and Virginia in 1877, the Maryland

oystermen worked as far south as Watts Island; but by the award of the boundary commission of the year noted only about twenty-three square miles of the area of this sound was left within Maryland limits, all of which is situated within Somerset county. The area of the natural oyster-grounds in the Maryland portion of this sound approximates eight square miles, and the annual product is about 250,000 bushels, valued at \$150,000. Tonging is the only form of fishery authorized, scraping having been interdicted in 1880. The reefs extend up the Pocomoke River a short distance beyond Old John Creek; while numerous, they are mostly of small area. In general the bottom is of mud, with sand or gravel near inshore. Apes Hole Creek, a tributary of this sound, is a favorite locality for the planting of oysters, a practice which prevails to a limited extent in certain parts of Maryland.

A right to oyster in common in the "Pocomoke River," exists between the citizens of Maryland and Virginia, this being admitted by both States. But a question exists as to where the river terminates and the sound begins. Citizens of Maryland claim that the mouth of the river is at the lower end of Sikes Island, but Virginians contend that it is at Williams Point, several miles above, and exercise exclusive jurisdiction to that point, leaving but a small area of reefs in common. Unfortunately, this contention has not been without loss of life, and is still unsettled.

The following interesting statements were made by Lieut. Francis Winslow, in writing of the general condition of the oyster reefs of Tangier and Pocomoke Sounds, after making an examination in 1878 and 1879.

The general opinion [among the oystermen] is that about twenty or twenty-five years ago, with the improved appliances in use at present, one-third more oysters could have been taken in the northern part of Tangier Sound than at present, from two to five times as many about Crisfield, and in Pocomoke Sound nearly seven times as many as at the present day; that without any of the modern contrivances, it was possible then for either tongers or dredgers to take many more in a day than at present. The general opinion of all persons in or about the

sounds, with a few exceptions, is that the beds are being worked much beyond their capacity and the majority are in favor of extending the "close time" as a remedy for the deterioration. Many think that a resting time of a year or more would be beneficial.

After the writing of the foregoing the fishery in each of these sounds continued to decrease until 1884-85, when the excellent set obtained in 1883 enabled the oystermen to gather a rich harvest. During that season and the one following, tongmen made during some days from \$8 to \$12. But much destruction was effected by thousands of bushels of oysters, having from one to fifty young ones attached to each individual, being sold at the shucking-houses. The reefs yielded very well again in 1891-92, but during the last season the oysters have been less abundant.

Crisfield, Vienna, Whitehaven, Seaford, (Delaware), and several smaller oyster marketing ports, all combined utilizing annually about 1,600,000 bushels, derive their chief supply from this region.

Choptank River.

This river is situated within Dorchester and Talbot counties, and, together with its tributaries, covers an area of 165 square miles. The depth of water ranges from a few inches to thirteen fathoms, and averages from ten to forty feet. The bottom is mainly hard yellow and gray sand, with occasional layers of blue mud and sometimes clay, only a small portion of it being soft. The area of natural oyster-grounds situated in this river and its tributaries approximates forty square miles, on eighteen square miles of which the use of scrapes is authorized, the remaining area being reserved exclusively for the tongmen.

The annual oyster product of the river and tributaries during the last five seasons has averaged about 1,750,000 bushels, for which the fishermen have received \$740,000, an average of 43,750 bushels and \$18,500 to the square mile. The average quantity per square mile obtained in this region is greater than

that of any other locality in Maryland, but the average value of the product per square mile is surpassed by the yield in the Patuxent and Tangier regions. The Choptank oysters are much smaller than those from the Tangier region and are among the cheapest obtained in Maryland. Large quantities of them are transported north each spring for planting purposes; and it is reported that as late as 1879, vessels loaded with planting stock from this river at a cost not exceeding five cents per bushel, the oysters being, of course, uncultured.

The citizens of Dorchester and Talbot counties enjoy the exclusive use of the Choptank river reefs in common, but those of the former county engage more extensively in oystering. The use of scrapes was first authorized in 1870, and since then a very great increase has taken place in the area of the oyster beds, and the shape of the oyster has become more uniform, rendering them more valuable from an economic standpoint.

Two large oyster-marketing ports, Cambridge and Oxford, utilizing annually about 600,000 and 300,000 bushels respectively, are located on this river.

Eastern Bay.

Eastern Bay is situated largely within Talbot and Queen Anne's counties, the remaining portion being a part of the "State waters." The area situated within "county waters" approximates seventy-three square miles; and, of that portion situated within the limits of Talbot county, about seven square miles are utilized by a scraping fleet, the remaining area being reserved for tonging. The greatest depth of water is about ten fathoms, the average being from twelve to twenty feet. The area more or less thickly covered with natural oyster-grounds, which are much scattered, is about twenty-six square miles. The average annual product of that portion within "county waters" is about 500,000 bushels, for which the oystermen receive about \$250,000, an average of 19,230 bushels and \$9,615 per square mile.

The Eastern Bay oysters are somewhat larger than the Choptanks and are sold at almost as high a price as the Tan-

giers. The only wholesale oyster ports situated on the shore of this bay are St. Michael's and Claiborne, which handle annually about 225,000 and 35,000 bushels, respectively, nearly all the rest of the catch going to Baltimore.

Chester River.

This river, the northernmost and smallest of the four large coastal indentations on the Eastern Shore, is situated entirely within the counties of Kent and Queen Anne's. The area approximates sixty-eight square miles, being but little smaller than the "county water" area of Eastern Bay, and the area of the natural oyster-beds is about seventeen square miles. While in one or two places in this river the depth of water is about eleven fathoms, few oyster-reefs exist where the depth is greater than twenty-three feet; or if they exist they are little known and are of no value, as tonging only is authorized.

As the oyster fishery in this estuary had not been sufficiently developed to warrant the use of dredges prior to the anti-dredging regulation of 1820, this form of oystering has never been legally prosecuted in these waters, but it has, during recent years, been a favorite locality for the operations of those dredgers willing to run risks in encroaching upon the areas reserved for the tongmen.

The annual oyster product of the Chester River approximates 450,000 bushels, for which the oystermen receives about \$235,000, an average of 26,470 bushels and \$13,823 for each square mile of reefs. There are no large wholesale oyster markets on the shores of this river and the catch is marketed mostly at Baltimore.

Patuxent River.

In the Patuxent river the oyster reefs extend from the mouth to the southern border of Prince George's county, a distance of twenty-four miles. It is reported that twenty-five years ago the reefs extended much further up the river than at present, and fossil shells have been found forty-five miles from the mouth of the river, but it is reported that no oysters

are now caught along the shores of Prince George's county, although a few were taken in 1885 and 1886.

The water in this river varies from a slight depth to twenty-two or more fathoms, the deepest water of the Chesapeake region occurring in this stream. Oysters are found in all depths wherever the bottom is suitable for their attachment. Dredging is not permitted in the Patuxent, and as the shaft tongs are not available for obtaining oysters from depths greater than twenty-four feet, a large number of "deep-water tongs" are in use here, since the introduction of which the annual product from this river has increased.

The water area of the Patuxent is about forty-six square miles and the area of the natural oyster-grounds approximates twelve square miles, all of which are situated within the counties of Calvert, St. Mary's and Charles. The annual product of the reefs is about 500,000 bushels, for which the oystermen receive about \$235,000, an average of 41,666 bushels and \$19,583 to the square mile. The average value per square mile of the products from this river during the last five years has been greater than in any other tributary in the State, and the average quantity has been surpassed only by that from the Choptank river.

These oysters are usually large and fat, and are marketed at a price fully equal to the average for the State, nearly all of them being sold in Baltimore at prices ranging from ten to fifteen cents more than received by the fishermen. The practice of "laying down" oysters to await a favorable market prevails here more extensively than in any other part of the Chesapeake.

Potomac River.

The oyster fishery in this river is more complicated and presents more intricate problems for solution than that of any other locality in the State. The Maryland-Virginia boundary has for over two hundred years been a subject for dispute between the two States. In 1877 this was settled by a board of arbitration so far as the boundary along the Potomac river

is concerned; and in accordance with this settlement the southern border of Maryland extends not merely to the middle of the channel of the river separating the two States, but to the extreme low-water mark on the Virginia side of the main body of the river and from headland to headland at the mouths of creeks along the same shore.

In 1785, while the boundary question was in dispute and before the adoption of the American Constitution, the States of Maryland and Virginia entered into articles of agreement for the regulation of commerce, navigation and other industries of mutual interest. The fisheries were at that time of sufficient importance to receive consideration in this agreement, and one of the articles of the compact provided for a right of fishery in common to the citizens of the two States in the Potomac river, and that in the regulation thereof neither State should enforce any law not approved by the other.*

The situation at present is as follows: Both Maryland and Virginia oystermen pursue their calling in any and every part of the river that they may choose outside of the tributaries. Even though operating side by side, the Maryland oystermen are supposed to work in accordance with Maryland laws, and those of Virginia comply with the statutes of that State, this being in accordance with the Convention Act of 1884, ch. 76, which is now operative. The one pays \$3 per ton license fee and the other \$1 per ton.† The one is expected to cull out and return all oysters under two and a half inches in length, while the other may take all he can catch, without regard to size. The result is that there is practically no culling regula-

* A condition somewhat similar exists in the English channel outside of the three-mile limit, in the once important oyster fishery prosecuted by fishermen from France and England. Ever since 1839, convention acts have existed between those two countries regulating that fishery so far as the operations of their respective oystermen were concerned, but that fishery is prosecuted in the free sea, in which neither of those two countries has jurisdiction exclusive of others.

† The dredging license fee in Virginia is fifty cents per ton per month; but the vessels usually dredge only two months during each season.

tion in the Potomac; and this has had a bad effect upon the enforcement of the cull law in other portions of Maryland. This condition of affairs in the Potomac constitutes a serious obstacle to the proper enforcement of the oyster laws of the State. The license laws and the close-season regulations, however, are very generally observed in the Potomac.

The area of this river from its mouth to the southern border of Prince George's County is 358 square miles. In addition to this, the tributaries situated in the limits of St. Mary's and Charles Counties have an area of thirty-seven and twenty-one square miles, respectively, in which only the tongmen of those respective counties are authorized to oyster, giving a total of 316 square miles. The area of oyster-reefs approximates forty-two square miles in the "State waters," and seven in the tributaries situated within the "county waters." The average annual product of these reefs is about 1,600,000 bushels, valued at \$700,000, of which about 500,000 bushels are obtained by the oystermen of Virginia. About 150,000 bushels of these oysters are annually marketed at Washington, D. C., but the majority are sold at Baltimore. From this river come the famous "Kettle Bottoms," the largest oysters produced in Maryland.

"Bay-Shore Grounds."

The Bay-shore grounds are situated on each side of the Chesapeake Bay, outside of the tributaries previously mentioned, and extend from Pool Island to the Potomac River on the Western Shore, and from Worton Point to Smith Island on the Eastern Shore. The reefs are found in all depths of water up to forty-five feet, and are almost continuous along the shore excepting in the northern portion of the bay, and in some places are one and a-half miles in width. The total area of these reefs approximates 116 square miles, of which fourteen are situated within the county limits of Anne Arundel, which, together with twenty-three square miles located about Tally Point, Sandy Point, Hackett Point, Thomas Point, Holland Island Bar, Swan Point Bar, Plum Point and Poplar Island,

are reserved for the tongmen, leaving seventy-nine square miles for the use of the dredgers. The annual product from these grounds during the last five seasons, has averaged about 3,025,000 bushels, valued at \$1,522,000, of which about 1,850,000 bushels, valued at \$940,000, were obtained by the dredgers, and 1,175,000 bushels, valued at \$582,500 by the tongmen.

The oysters obtained from these reefs, particularly those caught by dredges from the Anne Arundel shore to Point Lookout, are among the finest in Maryland, and are usually sold at the highest market price, being nearly always large and fat. The product from the bay shores has fluctuated very much during the last eight years, during some seasons the quantity obtained being almost twice that of the succeeding year. This was true of the seasons 1888-89 and 1889-90, and the quantity obtained since the former season has been very light compared with the extent previously. Because of the depth of water and the extent of the area along the bay shores, the probabilities are greater for the discovery of new reefs there than in other parts of Maryland. Every few years new reefs of small extent are discovered and added to the productive area.

Sinepuxent Oyster-Grounds.

These grounds are situated on the ocean side of the State and within the limits of Worcester county. At present their area does not exceed three square miles, the annual product of which during recent years has averaged about 75,000 bushels. These oysters are rather small and are used mostly for planting purposes, nearly all of them being again bedded on the private areas in that county. At one time this bay was one of the important oyster producing regions of Maryland, but at present the percentage of natural reefs to the total water area is less than in any other oyster-producing county in the State, being only about three per cent. The conditions of the oyster fishery in this country are totally different from those in the other counties in Maryland, no part of the regulations of the oyster industry of the Chesapeake bay and tributaries applying to the waters of the Sinepuxent bay.

The history of the fishery here is unique and interesting. Dredges have never been used to any noticeable extent, if at all. From 1820 to 1844 the oysters were so abundant that many persons engaged in catching them to be burned into lime, which sold at from four to eight cents per bushel. At present the only outlet into the ocean possessed by this bay is through Chincoteague Inlet, at the extreme lower end of Chincoteague bay. But during the period mentioned another and more convenient outlet existed. This was closed by natural causes about 1844, and the water in the bay gradually became so fresh and the bottom so covered with vegetable growth that the oysters were almost entirely destroyed except in the most favorable localities. Many efforts were made to retard the decrease by restricting the fishery. In 1846 a close time was established in the county from April 13 to September 1. In 1852 the removal of empty shells from the reefs for any purpose whatever was prohibited, and in 1861 it was required that only ten bushels of oysters should be taken in any one week by each man, but this provision was operative only one year.

The great scarcity continued until 1868, when a severe storm occurred in this region, producing an inlet in a narrow portion of the sand beach. The ocean water also flowed over the beach in other places and raised the water in the bay several feet, thus thoroughly scouring the bay by reason of its being very shallow. During the year following the one in which the storm occurred, an excellent set of oysters was obtained. At the end of two years these were marketable, and hundreds of persons were employed in tonging them, some making at times as much as \$100 and over per week. Difficulty was experienced in obtaining farm hands all along the shores of the bay, because of the great number employed in catching oysters. The carpenters left houses unfinished, the farmers their fields, and the country merchants their counters to engage in obtaining a share of the bountiful harvest. It is probable that during some of the years following 1870, the product of the common fishery in this bay amounted to 800,000 or more bushels, ranging in value from fifty cents

to \$1 per bushel. At one time in 1872 over forty vessels loading for northern markets were counted within sight of one point in the bay.

But the inlet made by the storm closed up and the oysters gradually decreased in abundance. From 1881 to 1884 the oysters were again somewhat plentiful, but not by any means so abundant as in 1872. Since 1884 the quantity obtained annually from the public reefs has been small, the extensive trade now prosecuted in that bay being dependent on the planting business, which has been conducted there more or less extensively since 1842. It seems probable that the opening of a new outlet for Sinepuxent bay, which is now in contemplation, will have a beneficial effect on the productiveness of the natural oyster reefs.

The data relative to the area and average annual product of these various localities during the last five seasons are here summarized:

LOCALITIES.	Area.	Average annual product.		Average product per square mile.	
	Square miles.	Bushels.	Value.	Bushels.	Value.
Pocomoke Sound. . . .	8	250,000	\$150,000	31,250	\$18,750
Tangier region	84	3,400,000	1,625,000	40,476	19,345
Choptank region. . . .	40	1,750,000	740,000	43,750	18,500
Eastern Bay.	26	500,000	250,000	19,230	9,615
Chester River.	17	450,000	235,000	26,470	13,823
Patuxent River.	12	500,000	235,000	41,666	19,583
Potomac River.	49	*1,600,000	700,000	32,653	14,285
Bay shores.	116	3,025,000	1,522,500	26,077	13,120
Sinepuxent Bay. . . .	3	†75,000	43,500	25,000	14,500
Total.	355	*11,550,000	5,501,000	32,535	15,495

* 500,000 bushels obtained by Virginia oystermen.

† In addition to this, 96,000 bushels, valued at \$87,500, were marketed from the private areas in this bay.

Of this oyster product, 4,850,000 bushels were obtained from tonging areas, 2,950,000 from dredging areas, and 3,250,000 bushels from scraping areas not including the catch by Virginia oystermen. About 500,000 bushels of the above-mentioned catch on scraping grounds, were obtained by dredging vessels working temporarily under a scraping license.

Tonging.

During the early history of the industry in Maryland citizens of any county were permitted at their pleasure and without restriction to tong oysters in any waters situated within the State. While this branch of the fishery has continued uninterruptedly from the origin of the industry until the present date, the places, times and methods of its prosecution have been frequently modified.

When the oystermen of 1820 were so much alarmed at a temporary decrease in the productiveness of the reefs that they interdicted in any part of the State the use of dredges, an increase naturally followed in the number of tongs employed. The apparent decrease in the productiveness of the reefs continuing, the General Assembly enacted in 1830 (L. 1829-30, ch. 87), that the use of these implements having more than six teeth on a side should be prohibited, except in the deep waters of the Chesapeake bay. But at the same session this Act was repealed so far as it affected the waters of the Eastern shore of the State (L. 1829-30, ch. 58), the restrictions against their use on the Western shore remaining operative until 1834, although some difficulty was experienced in enforcing it during the two or three years immediately preceding its repeal.

The enactments of 1829-30 (ch. 87) and 1835-36 (ch. 260), making a distinction between "county waters" and "State waters," and prohibiting the citizens of one county from oystering in the waters of another county, affected to some extent the tonging industry by confining it closely to those counties having extensive reefs within their limits.

By act of 1845-46 (ch. 240) it was made unlawful for any person thereafter to tong oysters in the waters of Worcester

county between April 13 and September 1 of any year, this being the first close season operative in any part of Maryland. In 1861 (ch. 57) this local close season was changed to May 1 to September 1; and it was further required that before any person should engage in tonging in the said county he should obtain a written permit from all the acting justices of the peace in the district bordering the Sinepuxent bay, said permit to expire on April 30, annually, and to limit the quantity of oysters to be taken by any one man to ten bushels per week; but at the following session this act was repealed (L. 1861-62, ch. 48).

As tonging was the only method of catching oysters authorized from 1820 to 1854, the development in extent of this branch of the fishery is practically represented by the statistics of the early oyster industry as herein presented.

The license system adopted in 1865 modified all tonging regulations and required, under a penalty of from \$20 to \$100, that before any person should engage in tonging oysters he should obtain from the clerk of the Circuit Court of the county of which he was a resident, and at a cost of \$5, a license for each boat employed, the proceeds from the issuing of such licenses being paid into the treasury of the State. The license authorized the use of tongs from June 1 in any year to June 1 following, and was to be renewed annually. It was further required that each boat licensed should be so numbered as to be readily identified.

During 1865-66, the first season in which this act was operative, 1,658 boats were licensed, the amount of revenue derived by the State therefrom being \$8,290, and the estimated quantity of oysters taken by these implements amounted to about 1,250,000 bushels.

At the next session of the general assembly (L. 1867, ch. 184) the license fee for tonging was reduced from \$5 to \$4 per boat; and in 1868 (L. 1868, ch. 406) a graded rate was substituted as follows: Boats measuring twenty feet or less in length, \$4; from twenty to twenty-five feet, \$6; from

twenty-five to thirty feet, \$8; and all over thirty feet, \$10 each. But in 1872 (ch. 167) the general fee was again changed, being reduced to exactly one-half of the preceding rates, and the new rates remained operative until 1892.

A report relative to the extent of the tonging industry made in 1870 by the commander of the fishery force shows that in the season 1868-69 the number of boats licensed to tong was 1,908, and the catch amounted to 1,735,370 bushels, for which the oystermen received \$607,380; and a similar report, made by the same officer in 1871, shows that in the season 1869-70 the number of boats was 1,647, the number of men operating them was 3,410, and the catch amounted to 2,043,075 bushels, valued at \$715,076. From 1870 until 1875 this branch of the oyster industry was very prosperous and good prices prevailed, the number of boats employed in 1872-73 being 950 more than in 1869-70. But following 1875 there was a large decrease in the extent of the fishery, both the quantity and value of the products being reduced. In the meanwhile the legal seasons and the methods of fishery were further restricted, the following being the more important of the regulations adopted:

In 1870 (ch. 364) it was required that no license to take oysters with tongs, should be issued in any part of the State to any boat or vessel licensed to catch oysters with dredges, scrapes or similar instruments. Prior to this enactment a number of boats obtained both dredging and tonging licenses with the purpose of using the dredges on areas on which those implements were unauthorized, it being difficult to prove even when a boat was apprehended on interdicted areas with wet oysters that the same were not obtained by means of tongs.

By Act of 1872 (ch. 241), it was made unlawful for any person to remove oysters from the limits of Wicomico county between May 15 and September 1 of each year, and at the same session a new close season was established on the natural reefs in Worcester county, this time from June 1 to September 15 of each year, but the act requiring the tongmen in this county to obtain license was at the same time repealed. But

in 1874 (ch. 77) the tongmen of Worcester were again required to obtain licenses, the rate being fixed at \$3 per man, which in 1876, was reduced to \$1 per man, the revenue derived therefrom to be expended by the county commissioners in the purchase of seed oysters to be planted in the waters of that county. This act also changed the close season on the natural reefs in Worcester from June 1–September 15 to May 1–October 1 of each year; but this was again changed in 1880 to May 1–September 1, this being the present close season operative in that county.

By Act of 1874, (ch. 181,) persons were prohibited from tonging oysters except for private use, or for the purpose of replanting or bedding in the State, or for sale to citizens of the county wherein they are caught or of the county next adjoining between May 1 and September 1 in each year, this being the first attempt at establishing a general close time on this branch of the industry. This Act also required that all fees derived from issuing tonging licenses, excepting in Worcester County, should be devoted to the public schools of the respective counties wherein the licenses were issued, the sum received from white owners of licensed boats going to the support of the white schools and the sum from the colored owners to the colored schools.

In 1880, (ch. 198,) the general close time was increased fifteen days, being changed to April 15–September 1. As the close time established in 1874, did not interdict the taking of oysters for sale in the county where caught or in the adjoining county, the close time provided for in 1880, was practically the first general one operative on the tonging branch of the fishery. But this Act permitted the taking of oysters during the interdicted time in quantities not exceeding five bushels per day for private use or for planting purposes, and when the Courts were called upon to interpret this provision they rendered decisions permitting the taking of unlimited quantities, so that the provision was effective only during a portion of one season. The proper remedy, however, was applied at the next session of the General Assembly, and in 1886, (ch. 296,) the length of

the general close time was decreased for the first time since the adoption of the system, being changed from April 15–September 1 to April 24–September 1.

Before the enforcement of the general close season on tonging, the men engaged in this fishery had a great advantage in the privilege to catch and bed oysters during the summer months and thus have a supply on hand for the winter markets. This privilege, however, was little appreciated and few persons took advantage of it.

About this time there was introduced in Maryland an apparatus for catching oysters, commonly called the “deep-water tongs,” of which there are a number of varieties. They all differ from the ordinary tongs in being much larger and heavier and have no shafts, being lifted by means of ropes and winders. They are much more injurious to the reefs than the ordinary tongs, but are employed with much success in places having too great a depth of water to permit the use of shaft tongs, the latter being the more effective implements in depths less than twenty-four feet. In 1888 (ch. 394) the use of these implements was prohibited in the waters of Talbot, Queen Anne’s, Dorchester, and Anne Arundel counties, but numbers of them are yet employed in Calvert, St. Mary’s and Somerset counties.

In 1890 (ch. 333) an act local to Talbot, Queen Anne’s and Kent counties was passed, providing that in those counties each man engaged in tonging or culling should be licensed, and not the boat, as was formerly the case, the fee being placed at \$4 per man. The licensing of the tongmen instead of the boats had been practiced in Worcester county since 1874. This method worked so well in the three counties named, both in increasing the revenue and in enforcing the regulations of the fishery, that in 1892 (ch. 278) it was applied to all the counties of the State except Worcester, which retained its local license system of 1874.

The new license fee was placed at \$3.50 for each person engaged either in tonging or culling, of which fifty cents should go to the clerk of the circuit court by whom the license

was issued, thirty cents to the oyster fund of the State, and the remaining \$2.70 to the public schools of the county in which the license was granted; provided that boys under fifteen years of age should not be required to obtain license, and that the county commissioners of any county should be authorized to give special permission to any women who have no visible means of support to take and catch oysters without further license. It must not be understood from the last-mentioned provision that a large number of women engage in tonging oysters in Maryland. On the contrary, there are not more than two or three in the entire State, and no special demand existed for this exception to the license regulations. The number of "boys under fifteen years of age," employed on the tonging boats is quite large, there probably being an average of one to every six men. The boys cull the oysters as they are tonged; this work is quite light and easily performed, except in cold or rough weather.

The effect in the change in the license system and rate has been to double the revenue derived therefrom, as will be observed from the following table exhibiting by counties the revenue from this source during each of the last five seasons.

Table exhibiting by counties the revenue received during the last five seasons from issuing tonging licenses.

COUNTIES.	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.	Total.
Somerset....	\$577 00	\$560 00	\$1,158 00	\$1,140 00	\$1,911 00	\$5,346 50
Wicomico....	1,301 00	1,360 00	1,399 00	1,530 00	2,271 50	7,861 50
Dorchester..	2,835 00	3,694 00	3,306 00	2,799 00	5,596 50	18,230 50
Talbot.....	1,626 00	1,861 00	4,948 00	2,908 00	4,196 50	15,539 50
Qu. Anne's...	868 00	1,129 00	4,148 00	4,256 00	3,286 50	13,687 50
Kent.....	941 50	1,091 00	3,076 00	3,688 00	3,593 50	12,390 00
Anne Arun'el	1,926 00	1,931 00	2,140 00	1,953 00	3,895 50	11,845 50
Calvert.....	1,527 00	1,666 00	1,863 00	1,891 00	2,828 00	9,775 00
St. Mary's...	1,638 00	1,828 00	2,180 00	2,192 00	3,944 50	11,782 50
Charles.....	462 00	476 00	542 00	431 00	658 00	2,569 00
*Worcester..	110 00	145 00	183 00	100 00	172 00	710 00
Total.....	13,811 50	15,741 00	24,943 00	22,888 00	32,353 50	109,737 50

* License system unaffected by the general law.

The full effect is observed by comparing the total revenue in 1888-89 or 1889-90 with that in 1892-93, the seasons 1890-91 and 1891-92 not presenting a proper comparison, as the new system was then operative in only three of the counties, viz., Talbot, Queen Anne's and Kent. This great increase in the revenue has been effected notwithstanding a decrease in the number of men engaged in this branch of the fishery.

By the aforementioned act of 1892 the general close time on tonging was changed from April 21-September 1 to April 21-September 14. This increase in the length of the close season has been beneficial chiefly to the agricultural interests of the counties bordering the bay, due to the fact that an early opening of the oyster season makes it difficult to obtain laborers to assist in harvesting the farm produce. The following table exhibits in a condensed form the various general close times operative in the tonging branch of the oyster fishery since the adoption of the first one in 1874:

Years operative.	Close time.
1874-1879.....	May 1-Sept. 1.
1880-1885.	Apr. 15-Sept. 1.
1886-1889.....	Apr. 24-Sept. 1.
1890-1891.....	Apr. 21-Sept. 1.
1892-.....	Apr. 21-Sept. 14.

In addition to the general close seasons, certain localities have had local close seasons differing therefrom, as follows:

LOCALITIES.	Years operative.	Close time.
Worcester County	1846-1860	Apr. 13-Sept. 1.
	1861	May 1-Sept. 1.
	1862-1871	Apr. 13-Sept. 1.
	1872-1873	June 1-Sept. 15.
	1874-1879	May 1-Oct. 1.
	1880-	May 1-Sept. 1.
Wicomico County.....	1872-1879	May 15-Sept. 1.
	1880-1885	May 1-Sept. 30.
	1886-	Apr. 15-Sept. 30.
Patuxent River.....	1870-1872	Apr. 20-Oct. 10.
Potomac River....	1880-1884	Apr. 1-Aug. 31.
	1884-	Apr. 15-Aug. 31.

The present regulations respecting the licensing of tongmen are as follows:

Any resident of this State desiring to catch or take oysters with rakes or tongs, for sale, in any of the waters of this State, shall first obtain, by application to the clerk of the circuit court for the county wherein he may reside, a license therefor, and such license shall have effect from the fifteenth day of September in any year in which it may have been obtained to the twentieth day of April, inclusive, next succeeding; provided that such license shall not authorize the taking or catching of oysters in any creek, cove, river, inlet, bay or sound within the limits of any county other than that wherein the license shall have been granted, and that the boundaries of the counties bordering on navigable waters shall be strictly construed so as not to permit the residents of either county to take or catch oysters beyond the middle of the dividing channel; provided that nothing in this section shall be so construed as to prevent the citizens of Queen Anne's and Kent counties from using the waters of the Chester River in common, or the citizens of Dorchester and Wicomico counties from using the waters of Nanticoke River in common, or the citizens of Queen Anne's and Talbot counties from using the waters of Wye River and the mouth thereof in common, or the citizens of Dorchester and Talbot counties from using the waters of the Choptank River in common. Provided, however, that the County Commissioners shall be authorized to give special permission to any woman who has no visible means of support, to take and catch oysters without license. Provided also, that boys under fifteen years of age shall not be required to license.

Each and every license to take or catch oysters for sale, with rakes or tongs, shall state the name, age and residence of the person to whom the same is to be granted, the number and the county in which the same is to be used, and every applicant for such license shall pay to the clerk of the court when such license may be granted and before the issuing and delivery of the same, the sum of \$3, and also the sum of fifty cents as a fee to the clerk for issuing the same. Nine-tenths of the amount received from tonging licenses shall be paid by the clerk to the school commissioners for the public schools in the respective counties where such licenses are issued: the sum received from white tongers to go to the white schools, and

the sum received from the colored tongers to go to the colored schools.

Every applicant for license to take or catch oysters with rakes or tongs, shall be required to make oath or affirmation before the clerk authorized to issue the same, or some justice of the peace, on whose certificate of the taking of such oath or affirmation the clerk shall issue said license, that the facts set forth in said license are strictly true; that he has been a bona fide resident of the county for twelve months next preceding his application for said license; that he desires and intends to use said license in the county in which he resides, or the waters used in common, as hereinbefore provided in this article, and that he will comply with and obey all the laws of this State regulating the taking or catching of oysters.

The Comptroller of the Treasury shall cause to be printed and delivered to the clerk of the circuit courts for the several counties, the requisite number of such blank licenses and take receipts for the same as for other licenses furnished; and said clerk shall, on the first Monday of March and December of each year, return to the Comptroller a list and account of such licenses issued by them, and at the end of each tonging season, shall return all unused licenses to him, and shall pay over to the Comptroller one-tenth of the amount received by him for such licenses, which amount the said Comptroller shall place to the credit of the "oyster fund;" and no license to take or catch oysters with rake or tong shall be used on any boat or vessel which is licensed to take or catch oysters with scoop, drag, dredge or similar instrument, during the season for which such boat or vessel is licensed, and all licenses shall expire at the end of the season.

If any person shall use any canoe or boat not licensed as required by the preceding sections of this article in taking or catching oysters with rakes or tongs, he shall, upon conviction thereof before a justice of the peace for the county wherein the offense has been committed, be fined not less than \$20 nor more than \$100; and in case of refusing to pay the said fine, said party shall be confined in the House of Correction for a period of not less than three months nor more than one year, and in any such case the boat or vessel shall be forfeited, and may be condemned, in the discretion of the judge or justice of the peace.

Making a careful calculation, it is found that the total product of the tonging branch of the common fishery since the beginning of the present century, not including the small stock used for lime or fertilizing purposes or those obtained by the citizens of other States, approximates 160,000,000 bushels, for which the tongmen have received about \$47,000,000. Of this amount the estimated product since the adoption of the license system in 1865, is 100,000,000 bushels, valued at \$32,000,000, leaving 60,000,000, valued at \$15,000,000, as the catch from 1801 to 1864. The largest catch by means of tongs during any one season was doubtless in 1884-85, when 4,741 boats were licensed in the Chesapeake region alone, the product, according to the best estimates, amounting to about 6,500,000 bushels, valued at \$2,375,000. But as the number of men oystering during that season was greater than ever before or since, the average catch per man was very much less than during some previous years.

The total amount of revenue derived from the issuing of tonging licenses since 1865, and to the close of the fiscal year 1893, amounts to \$319,175.65, \$173,316.50 of which has been received during the last ten years, and \$109,737.50 during the last five years.

The following table exhibits the number of tonging licenses issued in each of the counties up to present date. It is proper to state that during certain seasons since 1876, many of the tongmen of Somerset County have refused to license. This has been due chiefly to the contention as to the right of oystering in common with the citizens of Virginia in the Pocomoke and the Somerset tongmen, when feeling themselves especially aggrieved, have refused to pay the license fees.

Table showing the number of tonging licenses issued in Maryland during each season since 1865.
 [The figures in bold face type indicate that the licenses were issued to the men; in other instances the boats were licensed.]

YEARS.	Somerset.	Wicomico.	Dorchester.	Talbot.	Queen Anne's.	Kent.	Anne Arundel.	Calvert.	St. Mary's.	Charles.	Worcester.	Total No. of boats.	Total No. of men.
1865-66	267	89	243	212	116	117	162	139	229	19	65	1,658	.....
1866-67	263	86	251	234	103	98	193	157	220	15	64	1,684	.....
1867-68	234	92	220	211	146	84	218	183	284	21	80	1,803	.....
1868-69	246	110	220	246	105	93	222	189	336	22	81	1,907	.....
1869-70	128	115	210	202	67	77	223	180	309	16	120	1,647	.....
1870-71	178	112	331	199	115	103	234	145	267	8	(*)	1,692	.....
1871-72	252	106	441	181	119	96	240	146	220	12	(*)	1,816	.....
1872-73	245	195	575	274	178	95	321	321	362	48	(*)	2,596	.....
1873-74	125	125	405	289	183	109	421	380	307	22	(*)	2,357	.....
1874-75	329	172	472	294	210	120	314	237	325	50	291	2,523	291
1875-76	239	98	280	276	172	101	396	207	272	49	241	2,090	241
1876-77	72	88	212	254	146	101	250	186	244	28	193	1,581	193
1877-78	59	133	182	217	139	166	348	198	197	23	170	1,602	170
1878-79	2	108	142	258	144	122	343	243	212	30	211	1,604	211
1879-80	2	134	199	281	145	123	301	312	183	41	106	1,721	106
1880-81	37	173	291	386	391	137	310	306	297	101	237	2,429	237
1881-82	17	171	317	371	389	114	342	314	350	118	360	2,503	360
1882-83	25	197	353	294	511	138	364	269	386	93	333	2,630	333
1883-84	166	183	387	260	591	181	358	259	366	180	336	2,781	336
1884-85	756	296	696	457	648	250	407	392	663	176	153	4,741	153
1885-86	536	300	736	453	263	267	456	367	618	136	62	4,132	62
1886-87	317	344	742	430	248	245	472	317	610	130	97	3,855	97
1887-88	207	340	839	450	251	262	512	359	582	112	126	3,914	126
1888-89	191	289	861	490	284	267	560	423	558	132	110	4,055	110
1889-90	176	297	948	559	364	316	607	461	626	136	145	4,490	145
1890-91	355	304	1,003	1,237	769	769	650	521	757	155	183	3,745	3,301
1891-92	330	333	933	1,727	1,064	862	615	531	759	122	100	3,623	2,753
1892-93	546	649	1,599	1,139	930	741	1,113	808	1,127	188	172	.....	9,081

* Tongmen exempt from license system.

Area and Location of Grounds.

The water area within the county limits of Maryland approximates 1,025 square miles. Tonging is permitted on all of this area except certain small places reserved for private use, yet as scraping is authorized in Somerset, Dorchester and Talbot counties on 112, 118 and 47 square miles, respectively, and as the tongmen do not usually work on grounds frequented by men using more effective apparatus, only 748 square miles of water area are devoted exclusively to their use. Of this, the area more or less covered with natural oyster reefs approximates 131 square miles. Of the 1,334 square miles of "State grounds," thirty-five square miles containing some of the best reefs are reserved for the tongmen, twenty-three miles of this area being covered with natural reefs. This gives a total of 154 square miles of oyster beds on which tonging alone is authorized. The average annual product from this area during the last five seasons has approximated 4,850,000 bushels, for which the oystermen have received \$2,200,000, an average of 31,493 bushels and \$14,269 to the square mile.

The reefs situated within the tonging areas are usually smaller in extent and not so continuous as those in the dredging and scraping areas. The ground is not so level, the oysters occurring more in heaps. These reefs are located principally along the Anne Arundel shore, in the Patuxent River, Chester River, Eastern Bay and the small tributary waters of Choptank River and Tangier Sound. They are all close in shore where the water is shallow, usually not exceeding twenty-six feet in depth, and averaging from ten to twenty-two feet. In a few localities, however, as in the Patuxent River, much greater depths are found; but in those places a form of tong suitable for deep water is employed to some extent.

As the tonging reefs are situated in the inshore waters where the dredging vessels harbor at night, and in the mouths of rivers and inlets directly in the path of navigation, the opportunities for dredging thereon without detection are great. On account of the exposed position of the dredging-grounds,

situated in the deep waters off shore, the rough weather prevalent during the latter half of the oyster season prevents the dredging vessels from working more than three or four days in the week, and when not able to dredge they seek shelter in the coves and rivers with every temptation to take the oysters directly under them, resulting in the tonging reefs being not entirely free from their depredations. And at times, during periods of scarcity on the "State grounds," certain "county grounds" have been openly and defiantly used by the dredgers, this being particularly noticeable in 1888 and 1889. However, these occurrences are not so common as is generally supposed, and during the last three or four years the quantity of oysters taken in this manner has probably not been very large. It is proper to state that Maryland's experience with the difficulties encountered in protecting reserved areas has not been peculiar, nearly all the extensive oyster-producing localities having suffered in this respect.

Boats and Apparatus.

Tonging is prosecuted with many forms of boats varying in size from forty-five feet in length to such as are scarcely sufficient to float one man with a few bushels of oysters. The principal forms of craft employed are canoes, skiffs, bateaux, brogans, and sloops. These are built mostly on the shores of the Chesapeake and tributaries, the greater number being constructed by the oyster men who use them. Canoes are by far the most plentiful, and in some parts of Maryland the words canoe and tonging boat are synonymous. In the early part of the present century, because of the cheapness of its manufacture, this was almost the only type of boat employed by the people of Maryland in the oyster industry; and they had been in extensive use by the Indians before the settlement of the State. In references to the canoes observed on the occasion of his visit to the Chesapeake Bay, in 1609, John Smith says, in his well-known "Travels and Adventures":

Their fishing is much in Boats. These they make of one tree, by burning and scratching away the coales with stones and

shells till they have it in forme of a Trough. Some of them are an eln deep and fortie and fiftie foot in length, and some will beare 40 men, but the most ordinary are smaller, and will beare 10, 20, or 30, according to their bignesse. Instead of Oares, they use Paddles and sticks, with which they will row faster than our Barges.

Canoes were originally made of pitch pine from a single log, and were straight in the bow and pointed at both ends. The average size at present is about twenty feet in length, four feet wide across the gunwales, and eighteen inches deep on the inside. Formerly, large ones, thirty feet and more in length and five or six feet wide, were also made from one log. But as the number of large pitch-pine trees decreased the size of the canoes was necessarily lessened. This finally led to the use of three, five and seven logs in one boat, the different logs being joined to each other by wooden keys or iron bolts driven in edgewise. When three logs are used, one forms the keel and the others form the sides. The large canoes generally have a short length of decking in the bow and sometimes a small house and usually a centerboard. The smaller ones carry only one mast, with a triangular sail; the larger ones have two masts, with triangular sails and sometimes a jib. The cost of these canoes ranges from \$60 to \$600 each. Some of them last a very great length of time. The Martha Washington, 10.84 tons, was built in 1827, and is still doing service. The dimensions of this vessel are: length, 39 feet; breadth, 13.5 feet, and depth, 4.8 feet. The number of skiffs, bateaux, brogans and sloops employed in tonging is not large; and as these boats are not peculiar to the oyster industry of the Chesapeake, but are of the same type as employed in the fisheries of other localities, a description of them is unnecessary in this connection.

The average number of vessels and boats employed in tonging during the last five seasons has been about 5,000, with a total valuation of \$410,000. Of these sixty, valued at \$30,000, measure over five tons. Generally the tonging boats are owned by the men using them; but in some instances a large number are owned by oyster marketmen and others who hire

them at so much per day to the fishermen. The license system of 1892 has had a beneficial effect in encouraging the tongmen to own their boats. The oyster regulations do not authorize the issuing of tonging licenses to those boats having a scraping or dredging license.

The tongs used in Maryland are probably larger than those employed elsewhere in America, excepting in the adjoining State, Virginia. They have from ten to eighteen teeth on each side and the shafts are from twelve to twenty-eight feet in length. The large ones are sometimes improperly designated "rakes." The tongs hold from one-half peck to three-fourths of a bushel of material, but as a large quantity of the rubbish of the oyster beds is also taken up at the same time, the number of oysters obtained at each lift is usually very much smaller.

In the limits of Somerset, Calvert, and St. Mary's counties and along the bay shores a number of "deep-water tongs" are employed. These have no shafts, but are much like two dredges joined together as shaft tongs are. They are hauled by ropes, the labor being generally lightened by the use of a small winder attached to the mast. These implements have been employed to a large extent only about eight years.

The Tongmen.

The crew of a boat engaged in tonging consists of from one to three persons, one of whom is frequently a boy, whose duty it is to attend to the culling, throwing the shells and small oysters back into the water. The total number of persons employed in this branch of the oyster fishery during the last five years has averaged about 11,000, of whom about 1,500 were boys. Usually the men in one boat work on shares, while the boys are employed on wages, varying from fifty cents to \$1.25 per day. One effect of the present or "1892 license regulation" has been to decrease the average number of persons tonging from one boat and to increase the number of boys employed in the fishery.

The tongmen live near the shores adjacent to the reefs and are all citizens of Maryland, non-residents not being permitted to engage in this branch of the fishery. They are also mostly natives of the State, there probably not being 100 tongmen in the whole State not born and raised there, and about one-fourth of them are colored. All are not entirely dependent on oystering for support, the greater number engaging also in agricultural pursuits, while many of the remaining find occasional employment in the various industries of the bay counties. Most of them own small homes and an acre or so of ground, which constitutes a garden.

There are few workmen in America more independent than these. At almost any time during the season a tongman can, in a good working day, catch from four to twelve bushels of oysters, for which there is always a demand almost at his door. Then, having sufficient to supply his temporary needs, he usually takes things easy. While some are indolent and work only when compelled by necessity, yet, as a class, they compare favorably in industry and morals with any other body of men similarly situated.

The annual incomes of the tongmen range from \$100 to \$800, averaging about \$225. They sell their catch to the neighboring market houses or to the transportation vessels. Usually the men engaged in this fishery do not work therein more than about 125 or 140 days during the season, the rough weather interfering with their operations during the rest of the time. During September, October, and November, which are particularly pleasant months on the Chesapeake, they average about twenty days each month; but in January and February they work only about five to fifteen days each, and occasionally during those two months they are compelled to remain ashore for weeks at a time.

Dredging.

The use of dredges in the oyster fishery of Maryland originated about the beginning of the present century. In the early history of the industry, the small quantity of oysters

required to supply local markets did not warrant the purchase of these implements, but as the demand increased, the more efficient apparatus was brought into use, and dredges were soon employed in all the waters of the State in which oysters were obtained in large quantities for commercial purposes, this being confined mostly to the lower portions of the bay. But their use had long been regarded as destructive to the reefs, and the opposition to them dated from their introduction into these waters.

The first oyster law of Maryland (L. 1820-21, ch. 24), passed December 22, 1820, was enacted to prohibit their employment in any part of the State, this enactment being preceded by the preamble given on page 224, which sets forth the reasons for adopting this extreme protective measure. This regulation, however, on account of the extensive area of water to be protected, could not be fully enforced. In the attempt to enforce compliance with its provisions each tide-water county took the matter in hand, and the sheriffs with their deputies and the posse comitatus frequently sallied forth, impressing sail and steam vessels into their service to arrest the offenders, but without accomplishing the desired result. The law, however, was frequently re-enacted or amended with increased or more easily applied penalties, and from 1820 to 1865, the use of any form of dredges in catching oysters in Maryland waters was unlawful, except as affected by a local regulation enacted in 1854, authorizing the use of scrapes in the waters of Somerset County by the citizens thereof.

The difficulty experienced in wholly preventing this mode of oystering and the doubt entertained by many persons as to the good policy and utility of such a procedure, together with the need of revenue in the State treasury, led to the compromise of 1865 and the adoption of the license system.

This system, provided in reference to dredging, as follows: The comptroller of the State treasury was required to issue a license to any applicant who had been for the twelve months immediately preceding a resident of the State, said license authorizing him to use a vessel owned by him in catching

oysters by means of dredges from September 1 to June 1 following, in each year, "within the waters of the Chesapeake Bay, and not within any other bay, river, creek, strait, or sound, and not on any oyster bed or rock on or about Tally Point, Sandy Point, Hackett Point, Thomas Point, and Three Sisters, on the western side of the Chesapeake Bay, and not within the Chesapeake Bay where the water is less than fifteen feet deep." The fee for the license was placed at \$5 per ton, the license to be renewed annually. Steam was not permitted to be used in any manner in the catching of oysters, and all licensed vessels were required to carry printed numbers on their sails in a particular manner so that they might thereby be easily identified.

The State records show that during the first season after the adoption of this regulation, the number of dredging licenses issued was 391, the amount of license money paid for these being \$43,862.40. The first license to dredge oysters issued by the State was granted on August 1, 1865, to the Baltimore schooner *Alice*, 37.41 tons measurement. According to records furnished by the late Mr. C. S. Maltby, the quantity of oysters taken by the dredging vessels amounted, during that season, to 3,663,125,000 bushels, including the catch made by the scraping vessels of Somerset county, which during that season was very small.

As the scraping regulations of Somerset county, which had then been operative eleven years, had encouraged the building of a large number of vessels suitable for using dredges, a greater number of licenses were issued to residents of that county than any other. Almost an equal number of vessels owned at Baltimore and which had been engaged in transporting oysters and farm produce were also licensed. The vessels from Somerset county, having been built for use in Tangier sound, were smaller than those from Baltimore, the average tonnage from the two places being 20.10 and 25.36, respectively, and the total number of vessels licensed in those two localities 189 and 154, respectively. The number of vessels licensed in that season from the other counties was only

48, with an average tonnage of 22.34 tons, making a total of 391 vessels and 8,772.48 tons.

At the next session of the General Assembly (L. 1867, ch. 184) the dredging regulations were somewhat modified, the principal changes consisting in a reduction in the license fee from \$5 to \$2 per ton, and the adoption of other methods of enforcing the penalties for violations. By this act, in addition to the reefs mentioned in the act of 1865, the dredgers were prohibited from working on or about Holland Point bar and Plum Point; but the restriction against dredging in the Chesapeake Bay (the "State waters") where the water is less than fifteen feet deep was removed.

In 1868 the license rate was again changed (L. 1868, ch. 406), this time to \$3 per ton, at which it has remained to the present time. By this act, in addition to the reefs heretofore mentioned, Swan Point reefs were reserved from the dredgers.

According to estimates furnished by Mr. Hunter Davidson, the commander of the fishery force from 1868 to 1872, the quantity of oysters taken by the dredgers and scrapemen combined in 1868-69 was 6,305,600 bushels; in 1869-70, 7,190,400 bushels; in 1870-71, 6,686,400 bushels, for which the fishermen received \$2,216,960, \$2,516,640, and \$2,240,240, respectively.

In 1870 (ch. 364) the close season on dredging was increased thirty days, being changed from June 1-August 31 to May 15-September 15; and by the act of 1874 (ch. 181) this was again increased thirty days, being placed at May 1-September 30. By the latter act the dredgers were further prohibited from working within one-fourth mile west of Poplar Island or on the valuable reefs between that island and the mainland, but as a concession the lower portion of Eastern Bay was thrown open to their use.

By act of 1880 (ch. 198) the close time on dredging was increased forty-five days, being changed to April 1-October 14, this being the close season operative at present, excepting

that the close time in the Potomac River is from April 1 to October 31.

In 1884 (ch. 518) it was required that the dredging license should expire at the end of the season instead of running for a year after the date of issue, as was previously the case; and in 1886 vessels were permitted to obtain a license after the beginning of the season at the rate of fifty cents per ton per month for the remainder of the season. The latter provision, however, was repealed in 1892.

The regulations now governing the licensing of dredging vessels are as follows:

The Comptroller of the Treasury shall, upon application of any person who has been a resident of this State for twelve consecutive months next preceding such application, issue a license to such resident, and to no other person, to employ such boat in taking or catching oysters with scoop, dredge or similar instrument, within the waters of Chesapeake Bay, Potomac River, and in Eastern Bay, outside of a line drawn from the southwest corner of Kent Point to Wades Point; provided, that nothing herein contained shall authorize the taking or catching of oysters with scoop, dredge or similar instrument, on any oyster bar within one and a half miles of Talleys Point, Sandy Point, Hacketts Point, Thomas Point, Holland Island Bar, and Three Sisters, nor within one and one-half miles of Hollands Point Bar; nor of Swans Point Bar; nor between Poplar Island and the mainland of Talbot county, south of a line drawn from the north point of Poplar Island to Louis Point, on the mainland, nor north of a line drawn from the end of the south bar of Poplar Island and Paw Paw Cave, on Tilghmans Island; nor within one-fourth of a mile west of Poplar Island; nor within one-half of a mile of Plum Point; nor within the boundary lines of any county, unless herein otherwise specified; which licenses shall hold good for one season only, and shall only authorize the catching of oysters between the fifteenth day of October and the first day of April, on which day the dredging season shall end and the license expire.

The owner of such boat shall make oath before the comptroller, or his clerk, or if the owner be a resident of Baltimore city, he may make oath before the clerk of the court of com.

mon pleas, or if a resident of a county, he may make oath before the clerk of the circuit court for said county, that he is the bona-fide owner of such boat, to be described in the license; that he has been a resident of the State for the time hereinbefore prescribed; that there is no lien on said boat held by a non-resident, directly or indirectly, and that the said boat is not held or shall not knowingly be used with an intention to violate or evade the provisions of this law; and such applicant shall produce before the comptroller at the time of making such application the certificate of the taking of such oath, and the custom-house tonnage, which tonnage the owner shall swear to. The master of such boat shall also make oath before the comptroller, or his clerk, or, if a resident of Baltimore city, before the clerk of the court of common pleas, or before the clerk of the circuit court for the county wherein he may reside, that he has been a resident of this State for twelve months next preceding the time of taking such oath.

Before granting such license the Comptroller shall receive for it from the applicant at the rate of \$3 per ton for every ton the boat may measure, and the license shall be exhibited whenever called for by any officer of this State.

The Comptroller shall have painted, in black figures on white canvas, two sets of numbers corresponding to the license to catch oysters with dredge or any other similar instrument; each figure shall be twenty-two inches in length and of proportionate width, and the figures at least six inches apart; and he shall give to each person taking out such license two numbers thereof, one of which shall be securely sewed upon the starboard side and in the middle of that part of the mainsail which is above the close-reef, and the other number on the port side in the middle part of the jib, which is above the bonnet and reef; these numbers shall be placed in an upright position, and worn at all times during the dredging season, and returned at the end of the season, and shall not be canceled or defaced; and no other number shall be exposed to view or used than that which is furnished by the Comptroller.

The penalties, which are fully defined in the statutes, are ample for the satisfactory enforcement of the regulations, dredging without license or on forbidden areas being punished with imprisonment of the captain from three to twelve months and a fine of \$100 to \$500 on the vessel employed.

The use of steam vessels has never been permitted on the public reefs in Maryland, and while at present there is no interdiction against the use of vessels propelled by other artificial force, as electricity, etc., such a regulation would doubtless be adopted as soon as practicable were the use of such vessels attempted. At no time has there been in Maryland a restriction on the size of the vessels or the weight of the dredges used in the "State waters."

The close seasons operative in this branch of the fishery since 1865, are shown in the following condensed statement:

Years.	Close season.
1865—1869.....	June 1 to Aug. 31
1870—1873	May 15 to Sept. 15
1874—1879.....	May 1 to Sept. 30
1880.....	April 1 to Oct. 14

The following table exhibits, according to the State records, the number of dredging licenses issued in Maryland since the adoption of the license system:

Table showing number of dredging licenses issued in Maryland.

SEASON.	No. of licenses.	SEASON.	No. of licenses.
1865-66.....	391	1879-80.....	327
1866-67.....	401	1880-81.....	531
1867-68.....	438	1881-82.....	728
1868-69.....	563	1882-83.....	674
1869-70.....	642	1883-84.....	501
1870-71.....	637	1884-85.....	955
1871-72.....	597	1885-86.....	879
1872-73.....	559	1886-87.....	811
1873-74.....	621	1887-88.....	807
1874-75.....	538	1888-89.....	943
1875-76.....	691	1889-90.....	860
1876-77.....	677	1890-91.....	821
1877-78.....	565	1891-92.....	770
1878-79.....	465	1892-93.....	719

It will be observed that from 1878 to 1881 the number of licenses issued was much less than during the seasons imme-

diately preceding and following. While it is true that a decrease did take place in the number of vessels dredging, yet it was scarcely so great as is indicated by the license list, and the decrease in the number of licenses issued was due to failure on the part of a number of the vessels to comply with the license regulations. This was largely due to the difficulty of convicting illegal dredgers. Under the law of 1878, the wet oysters and ropes lying on deck were not sufficient to convict offenders, but it was necessary therefor that sworn statements should be made that the dredges were hauled and that oysters, and not rocks or stones, were brought up thereby. But in 1880 this defect in the regulations was remedied.

The largest annual product from this branch of the oyster fishery was probably obtained in 1873-74 or 1875-76, with 1884-85 and 1888-89 following close behind.

The Dredging Grounds.

The water area in Maryland on which this branch of the fishery is at present authorized approximates 1,299 square miles, of which about 121 square miles are covered more or less abundantly with natural oyster-reefs. The most valuable of these are located between Plum Point and Point Lookout on the Western Shore, on the Eastern Shore, along Kent, Sharp, and Hooper Islands, and on each side of the Potomac River. In the early part of the season the dredging vessels usually work off Kent and Sharp Islands, and later, as the oysters on those reefs become less plentiful, the beds lower down the bay are resorted to.

The depth of water over the reefs varies from that scarcely sufficient to float the vessel down to sixty or more feet, but the average depth is from fifteen to thirty feet. The amount of empty shells and debris on the beds amounts to something less than one bushel to every bushel of oysters. About forty-two square miles of the natural reefs are located in the Potomac River, and are resorted to also by the oystermen of Virginia, who take therefrom about 500,000 bushels annually. The

annual product obtained by Maryland oystermen from all the dredge reefs situated in "State waters" during the last five seasons has averaged 2,950,000 bushels, valued at \$1,450,000, an average of 24,386 bushels and \$11,990 to the square mile. About 200 of the dredging vessels work also under the scraping law in the "county waters" of Somerset, Dorchester, and Talbot counties, and catch therein annually about 500,000 bushels in addition to the foregoing.

The oysters obtained by the dredging vessels are generally larger and command better prices than those obtained from the tonging or scraping areas. But the condition of the dredging-ground during the last four years has not been as satisfactory as that of the tonging and scraping grounds. The implements and vessels are more effective, and the quantity of oysters left on the reefs has been growing smaller each year. On a number of the once prominent reefs profitable oystering has not been found for several years. This is true of the Western Shore from the "Steps" down to Cove Point, and to some extent of the "Lumps" and the Kent shore.

The boundaries of the dredging areas as defined by law must necessarily consist of imaginary lines, for the great extent of the water area of Maryland has, up to the present time, rendered a resort to buoys or similar indications too expensive for adoption. This fact, together with the frequent necessity for the dredging vessels to enter the small tributaries for harbor protection and other purposes, make it practicable for the vessels, particularly upon dark nights or foggy days, to take oysters from areas outside of their authorized limits. It is quite difficult to convict offenders, and even then suitable punishment is not always certain. The number of the dredging captains, however, who make a practice of oystering outside of their prescribed limits is small; but as long as the inducements to dredge on forbidden grounds is greater than the punishment therefor, some of the dredgers cannot be prohibited from catching oysters from such reefs as yield them the greatest returns.

Dredging Vessels and Boats.

Distinct and peculiar classes of vessels and boats, long celebrated for their speed and beauty, have been evolved in the Chesapeake bay for use in dredging. These range in size from the smallest craft barely able to carry two men with the small quantity of oysters they may catch in one day, to large schooners seventy-five feet in length and measuring seventy tons, with a carrying capacity of 3,000 bushels. The value ranges from \$80 to \$7,000 each, and averages about \$900, the tonnage averaging 20.76 in 1892-93. The largest vessel that has engaged in dredging during the last two or three seasons, is the *A. H. Shultz*, of Baltimore, the length of which is 74.4 feet, breadth 23.5, depth 7.4, feet and tonnage 71.20, with a crew of twelve men.

The types of vessels employed in this branch of the oyster industry consist of bug-eyes, schooners, pungies, and large canoes and sloops. The bug-eye, which is peculiar to the Chesapeake, is a development of the canoe, from which it differs chiefly in having a sharp prow, from a peculiar feature of which it derives its name, and in being decked over from end to end with suitable hatchways and without bulwarks. The large bug-eyes can not be made of logs, but must be framed and planked. They range in length from twenty-five to seventy-five feet and in cost from \$300 to \$2,500, and carry from 50 to 1,800 bushels of oysters.

The schooners and large sloops do not differ materially from those employed along other portions of the Atlantic coast. Pungies are similar to the schooners, the chief difference being in the former having a fuller bow and sharper stern than the latter, facilitating the rapid tackings desirable in dredging across the oyster reefs.

During the summer many of these vessels find employment in transporting farm produce and other commodities obtained or utilized along the shores of the bay.

The following exhibit shows the number of the various types of vessels and boats employed in dredging during the season 1892-93 :

Types.	No.
Sloops.....	32
Canoes, etc.....	91
Bug-eyes, schooners and pungies.....	596
Total.....	719

The vessels and boats hailing from the Eastern Shore are generally in part or entirely owned by their respective captains, but the greater number of the Baltimore vessels are owned by merchants, commission sellers, etc. Of the 719 vessels and boats engaged in dredging during the last season (1892-93), 324 were owned in whole or in large part by the captains in command of them.

The following tabular statement exhibits the number of owners of the vessels licensed to dredge in 1892-93, with their respective holdings :

	No. of owners.	No. of vessels.
Men owning 1 vessel.....	296	296
2 vessels ..	76	152
3 vessels.....	34	102
4 vessels.....	18	78
5 vessels ..	7	35
6 vessels.....	2	12
9 vessels.....	1	9
10 vessels ..	1	10
12 vessels.....	1	12
13 vessels.....	1	13
Totals.....	437	719

This statement shows that four men own forty-four vessels, or one-sixteenth of the total number; sixty-five men own 271, or three-eighths of the total; and 141 men own 423, or three-fifths of the total dredging vessels and boats employed.

The following table, exhibiting for each county the number of dredging vessels and boats in each tonnage grade, is of interest, especially to those persons desirous of effecting a tonnage limit on the vessels operating in the "State waters":

Table exhibiting by counties the tonnage grade of vessels engaged in dredging in 1891-92.

COUNTIES.	Tonnage.													
	Under 5.	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	70-75	Total.
Somerset	11	72	82	63	43	33	22	12	15	5	...	3	1	362
Wicomico.....	...	1	1	2	1	...	...	...	...	...	...	...	...	5
Dorchester.....	...	25	1	2	2	3	1	3	3	...	1	1	...	42
Talbot.....	...	10	...	1	...	1	...	...	...	...	...	...	...	12
Kent.....	1	...	...	...	1	...	...	...	...	...	2
Baltimore	2	6	24	34	36	45	27	32	10	3	2	...	221
Anne Arundel.....	...	1	15	4	2	2	...	1	1	...	...	...	...	26
Calvert.....	...	20	15	2	...	2	...	1	...	...	...	...	...	40
St. Mary's.....	...	39	12	1	1	2	3	...	...	...	...	...	...	58
Charles.....	1	...	...	...	1	...	...	...	...	...	...	2
Total...	71	153	97	96	86	76	71	44	50	15	4	6	1	770

The average "length of life" of a dredging vessel is about thirty-five years. As this branch of the oyster fishery has been prosecuted less than that time and as the number of vessels built each year indicates, in a general way, the prosperity of the fishery, the following table is presented, showing the years in which were built the vessels and boats employed in 1891-92.

This table shows that from 1875 to 1879, and from 1885 to 1892 the inducements to build dredging vessels and boats were much less than during the periods immediately preceding, the number built during these thirteen years being an average of sixteen per year, while from 1870 to 1874 and from 1880 to 1884, the average number each year was twenty-nine.

Table showing the years in which were built the vessels dredging in 1891-92.

COUNTIES.	1827.	1835.	1840 to 1844	1845 to 1849.	1850 to 1854.	1855 to 1859.	1860 to 1864.	1865 to 1869.	1870 to 1874.	1875 to 1879.	1880 to 1884.	1885 to 1889.	1890 to 1892.	Unknown.	Total.
Somerset.				5	11	12	14	32	61	42	88	61	24	12	362
Wicomico.					1			1	1		1			1	5
Dorchester.							1	4	5	6	18	4	2	2	42
Talbot.								1			2	5	4		12
Kent.								1						1	2
Baltimore.	1	1	3	18	17	26	27	34	38	8	34	5	3	6	221
Anne Arundel.								1	4	3	8	9	1		26
Calvert.								1	3	6	11	9	4	6	40
St. Mary's.							1	3	7	8	12	9	4	14	58
Charles.														2	2
Total.	1	1	3	23	29	38	43	78	119	73	174	102	42	44	770

For the purpose of exhibiting the distribution of the dredging vessels and boats the following table is presented, showing the number hailing from each county during the seasons noted:

Table showing by counties the number of vessels licensed during certain seasons.

LOCALITIES.	1868-69.	1886-87.	1888-89.	1891-92.
Somerset.	238	355	444	362
Wicomico.	12	15	16	5
Dorchester.	46	33	38	42
Talbot.		16	9	12
Queen Anne's.	1	1	1	
Kent.	1	8	11	2
Baltimore.	240	290	298	221
Anne Arundel.	20	26	25	26
Calvert.	1	45	41	40
St. Mary's.	2	21	60	58
Charles.	2	1		2
Total.	563	811	943	770

In 1890-91 the oldest vesssl engaged in dredging was the *Intrepid*, 32.16 tons, which was built in 1810, and is doubtless the oldest vessel in America. The *Juvenile*, 32.39 tons, the *Halcyon*, 17.02 tons, and the *William Washington*, 18.98, built, respectively, in 1827, 1835, and 1836, ranked next in the order of age. During the next season the *Intrepid* left the business to younger and more speedy boats, but the *Juvenile* and *Halcyon* remained in the fishery during that season and also in 1892-93.

Apparatus and Methods.

Each vessel engaged in dredging oysters in Maryland is provided with two dredges and two "winders" or windlasses for hauling the same, excepting that the very small boats employed have only one dredge and windlass. The average weight of the dredge is about one hundred pounds, no restriction on the size having ever been made in this State. They range in width from two to four feet, with from eight to eighteen teeth, the greater number of them being three feet wide, with twelve to fourteen teeth. The "winders" are securely fastened to the deck of the vessel about amidships, one being located on each side. Opposite these and on the gunwales are placed rollers three or four feet in length to facilitate the lifting of the dredges. The average value of the dredges, winders, rollers, chains and lines on each vessel is about \$100. The winders employed on the better class of the vessels in the Chesapeake are so constructed that if the dredge should catch on some obstruction on the bottom, the drum is automatically thrown out of gearing and the dredge rope allowed to run out.

The vessel is controlled by the captain, who remains aft in order to attend to the steering and manage the sails; the mate, when one is carried, stands midship directing the manipulations of the dredges, which are lifted by the winders, operated by the common hands. The vessel is usually worked with the wind, and may dredge lengthwise or across the reefs. It requires from one to four weeks to obtain a load of oysters,

the catch averaging from twenty to eighty bushels per day. Most of the vessels transport their catch to market, but some remain down the bay for months, and sell their catch to the "buy" or transportation vessels. As they move from reef to reef, according to the condition and abundance of the oysters, frequently from fifty to 200 vessels may be sighted at work in a single locality. It is reported that the provisions used on the vessels are much better now than formerly, both in quantity and quality. The cost for an average size vessel is now about \$40 for a trip lasting three weeks.

Probably no question of economic importance connected with the fisheries has led to more dispute or to a wider difference of opinion among rival theorists and practical fishermen both of America and Europe than that relative to the effects of dredging upon oyster beds. The use of these implements beyond the productive powers of the reefs, when no provision is made for replacing breeding oysters thereon, is injurious; but the same is true of any other form of apparatus. Dredges may also injure some of the oysters by tearing them open or crushing them, but the number thus destroyed is probably not large on those beds operated on year after year. The oysterculturists of New York and Connecticut find it to their advantage to use dredges many times the weight of those employed in Maryland. The use of these implements merely to stir up the oyster beds just prior to the spawning season, and thus to some extent clean the shells on the bed for the attachment of spat, is of much value. But after the spawning season the use of heavy implements is certainly injurious until the shells of the young oysters have acquired sufficient strength to resist being crushed by their action.

Men on Dredging Vessels.

The crew of a dredging vessel usually consists of the captain, mate, cook, and from two to nine common hands according to the size of the craft. The captains are all citizens of the State, and the greater number of them are married and have homes in Baltimore or "down the bay." They are

usually possessed of a little means and have a social standing in their local communities. Many of those residing in the counties have farms, to which their attention is devoted when not afloat. Others during the close season engage in the transportation of wood, farm produce, etc. Away from the Chesapeake the Maryland dredging captains are regarded as a reckless and lawless class of men. This does these men a great injustice; they are as peacefully disposed as the generality of mankind, engaged in a lawful and useful occupation, and obey the statutes as fully as the oystermen of any other State. But it is not surprising that out of 800 dredging captains there should be a few reckless and unprincipled persons, for this is generally the case in every other vocation.

The mate or chief assistant is generally a man younger than the captain, from the same locality, and usually expects within a few years to be in full command of an oyster vessel.

As to the remaining members of the crew, some small vessels from the counties obtain men from the localities in which the vessels are owned or in which the captains live; but the great majority of the vessels employ an entirely different class of men, who are in no sense baymen and to whom the dredging of oysters is frequently an episode rather than a pursuit. They have no peculiar knowledge of the business, being required merely to turn the winders that lift the dredges and to cull the oysters after they are brought on deck. So great discredit has been brought upon this branch of labor that none but the most destitute persons can be induced to do the work, and in order to man some of the vessels at times it is necessary to resort to means that strongly resemble impressment and violence. Very few of these men have homes; they come to Maryland at the opening of the dredging season from all parts of the country, without money and almost without clothes, being driven to the city to seek work by reason of the stress of weather. They usually hire out by the trip, which may last from ten to forty days, at a rate varying from \$8 to \$18 and provisions.

Less than twelve per cent. of these common hands are natives of Maryland, and many are unable to speak the

English language. From the statements given by each man at the offices of the shipping commissioners in Baltimore, in 1892, I have learned the nativity of 2,438 of them, this being exhibited in the following tabular statement :

*Nativity of common hands on Maryland dredging vessels
in 1892.*

United States.	No. of men.	Foreign countries.	No. of men.
Maryland.....	292	Germany.....	461
Pennsylvania.....	257	Ireland.....	427
New York.....	226	England.....	112
Virginia.....	89	Poland.....	62
Massachusetts.....	86	Russia.....	46
New Jersey.....	42	Scotland.....	45
Connecticut.....	34	Austria.....	36
Illinois.....	23	British Provinces.....	18
District of Columbia.....	14	Sweden.....	17
Ohio.....	13	France.....	15
Georgia.....	10	Switzerland.....	14
Delaware.....	8	Denmark.....	11
Michigan.....	7	Spain.....	8
Rhode Island.....	6	Norway.....	8
California.....	5	Africa.....	5
Wisconsin.....	5	Italy.....	3
Alabama.....	5	Portugal.....	2
Maine.....	4	Holland.....	2
Kentucky.....	4	Wales.....	2
North Carolina.....	3	'At sea'.....	1
New Hampshire.....	3		
Texas.....	2		
Vermont.....	1		
South Carolina.....	1		
Tennessee.....	1		
Colorado.....	1		
West Virginia.....	1		
Total, United States.....	1,143	Total, foreign countries..	1,295

While this does not exhibit the total number of men shipped during that season, yet the total proportionate representation from the various States and countries does not materially differ from that here presented. The fact is here disclosed that less than one-half of these men are natives of the United States and less than twelve per cent. are natives of Maryland, each of two foreign countries supplying many more men than that State.

It should be observed that, while it required only 1,964 persons to man the 221 vessels hailing from Baltimore city in 1891-92, yet the number of men shipped on those vessels during that season was much greater. This is due to the fact that many men made only one trip and others but two or three.

The captain of the vessel does not bargain with the men and frequently does not know of whom his crew consists until he is ready to proceed on the trip. There are persons in Baltimore who make a business of furnishing men for the vessels. They have small rooms in which are quartered the men seeking the work or whom they may have induced to accept of it. When these labor brokers receive an order to furnish a vessel with a certain number of men, they see that the men are properly on board, and for this service collect \$2 for each man obtained, this fee being paid by the captain and afterwards deducted from the compensation of the laborer. The laborers are advanced a small sum of money, usually about one-fourth of the total wages, for the purchase of clothing, especially oilskins, and such other things as they may desire.

Prior to going on a trip these men are required to sign articles of agreement before certain officers, and from these papers it has been learned that out of a total of 992 men shipped during one month in 1892 only 413, or forty-three per cent., were able to write their names. Of those born in America only twenty-five per cent. were able to write, and of the foreign born fifty-five per cent. were similarly situated. The reason for the proportion of illiterate men being so much greater among Americans than among those of foreign birth, is that many immigrants of fair education readily accept of this labor, while as a rule only the most destitute Americans resort to it. During the same season one vessel was manned by a crew of nine men, representing six nationalities, and not one of the persons on board, including the captain, was born in America, only three were able to converse in English, and not one was able to read or write in any language. This, however, was very exceptional.

The following data, furnished by Surgeon-General Wyman, of the United States Marine-Hospital Service, showing the nature and extent of the accidents to which these men are subjected, are here presented. In estimating the value of these figures it should be remembered that Baltimore is but one of many ports of relief for Chesapeake Bay, and that if records were obtained from Crisfield, Cambridge, Oxford, Annapolis, Washington, and other points, the figures would be much larger. Only surgical cases are included in the list, no computation having been made of the number of cases of pneumonia, pleurisy, and rheumatism brought into hospital from the oyster vessels.

Summary of surgical cases from oyster vessels treated in hospital by the United States Marine-Hospital Service at Baltimore, Md., in winter of 1882-83 and of 1883-84.

Character of injuries.	No. of cases.
Fractures caused by crank handles of winders.....	20
foreign bodies.....	7
falls on slippery decks, etc.....	14
Dislocation caused by crank handle.....	1
Frozen extremities.....	50
"Oyster-shell hands".....	30
Wounds contused and lacerated caused by falls.....	16
foreign bodies.....	19
crank handles.....	15

Total fractures, forty-one cases with seventy-two broken bones. Total surgical cases treated in hospital, 193. In addition to the foregoing a large number of cases were treated at the dispensary without being sent to the hospital.

The "oyster-shell hand" is a severe inflammation caused by wounds and poisoning from the oyster shells. The hand appears as if affected by a huge felon, and deep and free lancing is necessary in its treatment. The tendons and bones are often exposed and loss of one or more fingers sometimes results.

Much has been said about the brutality of the dredging captains, and the severe treatment to which they subject their crews. But the captains are not wholly responsible for the

sufferings of these men; as a rule they, as most other employers of labor, are humane and considerate of those in their service. Proof of this is found in the fact that when the men get in trouble on shore, they frequently send to the captain of a vessel for relief, and some men return year after year to seek employment on the vessels. While in the aggregate the number of cases of harsh treatment may seem large, yet such is not the case when consideration is taken of the number of men employed and their entire unsuitability for the work. They are so unaccustomed to discipline that the exercise of that authority necessary on board of a vessel, unavoidably produces some unpleasantness between the captain and the men. The very nature of the occupation, working upon slippery decks in freezing weather, together with the unskilled ability of these men, results in much suffering, for which the captain is in no sense blamable and for which, because of the financial interests involved if nothing else, his regret is second only to that of the unfortunate member of his crew. And when one investigates the life of these men when on shore and compares it with that led while on a dredging trip, the natural inference is that in many instances the latter is the more comfortable, and that not infrequently the men are better off when on the bay than they are in the city.

The vessel-owners recognize the injury that the employment of this class of labor is doing to the reputation of their business, and they would gladly welcome a change in the grade of men they employ. The payment of higher wages would of course secure better men, but the present profits of the fishery and the active competition with one another, which have produced this condition, will not admit of a few paying higher wages without a concerted action, and that seems impracticable. Many methods of State regulations for effecting the desired result have been suggested, few of which have been considered of sufficient practical value for adoption.

The most noticeable effort to improve the condition of these men was made by act of 1888 (ch. 513), which provides for the appointment by the Governor of a number of "shipping

commissioners" in Baltimore and the large ports down the bay, whose duty it is to supervise the engaging of employes on vessels measuring over ten tons, excepting such men as work on shares and residents of the county where the crew is shipped, the word "county" not applying to Baltimore city. These men are required to superintend both the engagement and discharge of the laborers, drawing up the contracts and seeing that they are fully complied with, receiving therefor a fee of fifty cents for each man shipped and twenty-five cents for each man discharged, one-half of these fees being deducted from the wages of the laborer and the remaining half being paid by the captain.

Financial Results.

The profitableness of the dredging industry varies much from year to year, according to the prices of oysters and their abundance on the beds to which this branch of the fishery is confined. In general it is not so profitable now as it was twenty years ago. On account of the large number of vessels engaged the marketable oysters are mostly secured during the first few months of the season, and the vessels do not find it profitable to work as late in the year as they formerly did, a large number of them during the last few seasons leaving this branch of the business about Christmas.

The length of time now required to obtain a cargo is also greater than formerly, this now being fifteen to twenty-five days, whereas eighteen and twenty years ago, a cargo could usually be secured in a week or ten days. This, of course, reduces the profits very materially, and the books of the vessel owners indicate that after paying all expenses, including wear and tear on the vessels, the profits are not very great, and vessel property of this class is now comparatively cheap in the Chesapeake.

If the vessel be not owned by the captain, the latter, with very few exceptions, runs it on shares, the arrangement being sometimes as follows: Out of the bill of sale are paid the wages, food bill, expenses of sale of oysters, etc., and from

what is left the captain receives forty per cent. and the vessel-owner sixty per cent. A more frequent method is for the owner of the vessel to receive one-third of the value of the catch and the captain to take the balance and pay all expenses. Many other forms of agreement exist. These ordinarily net the captain from \$35 to \$85 per month, according to the abundance and prices of oysters.

The mate and the cook, ship on wages, varying from \$15 to \$25 per month, with board. The common hands are usually paid by the trip at rates varying from \$8 to \$18, according to the abundance of employes and the ability of the men secured. The number of men available for this work appears to be smaller each year, and as a consequence the wages are increasing somewhat. In 1890-91 the average per trip was \$13.69, and in 1891-92 it was \$14.43, these figures representing the condition for the fleet. The better class of common hands ship by the month, at rates varying from \$12 to \$25, but the number of such men is small. On a few vessels from the counties the laborers work on shares, the agreements usually being as follows: The provision bill, commission sellers' charges, and similar expenses are first paid, then the owner of the vessel receives one-third of the balance and the captain receives a bonus of \$15 to \$25, after which the captain and members of the crew share alike.

Scraping.

The expression "scraping" is here applied to the taking or catching of oysters by means of a scrape or dredge within the waters of a county, "dredging" being applied to the same form of fishery when prosecuted in the "State waters." It is termed scraping from the fact that the vessels used are generally much smaller than those employed in the "State waters," and consequently must employ lighter dredges, which are known as scrapes. This branch of the oyster industry is prosecuted only in certain portions of three counties of the State, viz., Somerset, Dorchester and Talbot. It originated in Somerset in 1854, eleven years before dredging was authorized in

"State waters." Sixteen years later the use of scrapes was authorized on the southern shore of Dorchester county, and in 1874 on the northern shore of that county and in portions of Talbot.

The regulations permitting the use of scrapes in Somerset (L. 1854, ch. 4,) authorized any citizen of that county, after obtaining a license therefor, to use a vessel owned in the county to "catch oysters with a scrape or drag in any of the waters of said county, not parcel of any creek or river, not within 200 yards distant from the shore, and in waters not less than twenty-one feet deep." The license, which was issued by the clerk of the Circuit Court, was operative for one year without close season, and cost \$15 for each vessel, all moneys arising therefrom being paid into the school fund of the county, excepting fifty cents for each license, which went to the issuing clerk as his fee. As a large portion of Tangier Sound is situated within the limits of Somerset, this opened to the use of the scrapemen a large area of very valuable oyster ground.

By the act of 1867 (ch. 129) the restriction against scraping in Somerset within less than 200 yards of the shore and in waters less than twenty-one feet deep, was removed, and the license fee was reduced from \$15 to \$10. But this act also required that before receiving a license to scrape oysters the applicant should obtain from the comptroller of the State treasury a dredging license, in accordance with the general license law of the State, which had then been in force for two years, and it was made unlawful for any one to scrape for oysters in any creek, cove, or inlet, or during the period in which dredging was interdicted in the bay, viz., June 1-September 1.

Prior to 1877 the oystermen of Somerset enjoyed the privilege of scraping in a large portion of Pocomoke Sound, but after the award of the boundary commission of that year their operations were confined to the Maryland side of the new line, giving them only twenty-three square miles of area on the Pocomoke side of the county. In 1880 (ch. 445) the use of scrapes in this portion of the Pocomoke Sound was prohibited.

In 1884 the annual rate required to be paid for scraping licenses in this county was changed from \$10 each vessel to \$2 per ton of measurement, and it was further required that only such vessels as measured over ten tons should obtain a State license before being licensed to use scrapes. In 1886 (ch. 489) the scraping license fee was reduced to \$1 per ton, and in the same year the close time was changed to April 1–September 30.

By act of 1890 (ch. 629) the general assembly authorized an election to be held on May 13th of that year, in certain districts of Somerset, to decide whether to prohibit scraping in the waters of that county. The vote was favorable to the interdiction, but the courts decided that the procedure was irregular.

The scraping law operative on the southern shore of Dorchester county originated in 1870 (ch. 129), sixteen years after the privilege was first enjoyed in Somerset county. This law required the clerk of the circuit court of Dorchester to issue licenses to boats and vessels owned by citizens of that county, authorizing them to use scrapes in certain waters on the southern shore thereof between October 1 and April 30 in each year. It was required that the licensed boat should not exceed five tons measurement, and the license fees were established as follows: For every boat measuring less than twenty feet in length the sum of \$5; from twenty to twenty-five feet, the sum of \$8; from twenty-five to thirty feet, \$10, and all over thirty feet in length, the sum of \$20, the revenue derived therefrom being paid into the State treasury. In 1872 (ch. 181) it was required that the license fees thereafter should be paid into the treasury of the county school fund.

In 1874 (ch. 214) the scraping law for southern Dorchester was modified, the principal changes being in raising the limit of measurement of the craft employed from five to ten tons, changing the license fee to \$3 per ton, and in not permitting scraping within 200 yards of the shore, nor from May 1 to September 14. But in 1878 the license fee was reduced to \$2 per ton, and soon thereafter all boats measuring under five tons were required to pay a fee of \$8 each, without regard to

their actual measurement. In 1882 (ch. 327) the close time for scraping in these waters was changed from May 1–September 14 to April 1–September 30, and in 1892 (ch. 278) it was again changed to March 1–September 30.

The law authorizing scraping within certain limits of Talbot county, and which is common to that county and the northern shore of Dorchester county, originated in an act of 1874 (ch. 437) authorizing any twelve-month resident of either county to obtain a license permitting him to catch oysters from September 15 to April 30, by means of scrapes, in certain waters of those two counties. The license was obtainable from the clerk of the circuit court for the county of which the applicant was a resident, and no provision was made for licensing vessels measuring over ten tons. The fee was placed at \$3 per ton, the revenue derived therefrom being devoted to the school fund of the county in which the license was issued. In 1876 (ch. 405) the scraping season was changed to September 15–May 31, and in 1878 (ch. 359) the license fee was reduced to \$2 per ton. By act of 1884 (ch. 468) all boats measuring less than five tons were required to pay \$8 license fee, without reference to their actual measurement, and the scraping season in the waters referred to was changed to October 1–March 31, it being again changed in 1892 (ch. 278) to October 1–March 1.

The following statement exhibits in a condensed form the close seasons that have been operative in scraping in each of the three counties in which this form of fishery is authorized:

Somerset.		Dorchester, southern shore.		Dorchester, northern shore, and Talbot.	
Years.	Close seasons.	Years.	Close seasons.	Years.	Close seasons.
1854–66.	.....	1870–73.	May 1–Sept. 30	1874–75.	May 1–Sept. 14
1867–85.	June 1–Sept. 1	1874–81.	May 1–Sept. 15	1876–83.	June 1–Sept. 14
1886....	Apr. 1–Sept. 30	1882–91.	Apr. 1–Sept. 30	1884–91.	Apr. 1–Sept. 30
		1892....	Mar. 1–Oct. 30	1892....	Mar. 1–Sept. 30

The following table shows, so far as practicable, the number of scraping licenses issued in each county since the origin of this branch of the fishery. Much search has been made to find the record for Somerset from 1854 to 1869, but without success. With this exception, the list is complete:

Table showing number of scraping licenses issued in Maryland.

SEASON.	Somerset.	Dorchester.	Talbot.	Total.
1869-70.....	283	.....	.....	283
1870-71.....	359	125	.....	484
1871-72.....	453	130	.....	583
1872-73.....	276	132	.....	408
1873-74.....	224	106	.....	330
1874-75.....	322	149	59	530
1875-76.....	209	180	40	429
1876-77.....	165	142	47	354
1877-78.....	59	142	27	228
1878-79.....	151	157	34	342
1879-80.....	57	134	29	220
1880-81.....	292	148	30	470
1881-82.....	173	153	83	409
1882-83.....	278	177	64	519
1883-84.....	262	218	64	544
1884-85.....	469	310	100	879
1885-86.....	370	402	125	897
1886-87.....	428	334	93	855
1887-88.....	337	373	85	795
1888-89.....	262	433	85	780
1889-90.....	356	502	105	963
1890-91.....	632	550	116	1,298
1891-92.....	640	582	78	1,300
1892-93.....	647	483	102	1,232

Owing to a defect in the law operative at that time, a number of Somerset scrapemen from 1877 to 1880 engaged in this fishery without a license, and while the foregoing figures embrace all the licensed boats and vessels, it does not for those years include all that engaged in scraping. The defect was remedied in 1880, and since then there has been little, if any, difference between the number of boats licensed and the number actually at work.

The following table exhibits, by counties, the amount of fees paid for scraping licenses during each of the last five seasons :

License fees paid for scraping from 1889 to 1893.

SEASONS.	Somerset.	Dorchester.	Talbot.	Total.
1888-89.....	\$ 1,807 31	\$ 5,222 52	\$ 1,344 46	\$ 8,374 29
1889-90.....	2,540 83	6,211 26	1,688 34	10,440 43
1890-91.....	6,786 20	6,584 75	1,806 00	15,176 95
1891-92.....	4,463 01	7,937 00	1,267 92	13,667 93
1892-93.....	5,205 22	6,468 30	1,660 22	13,333 74
Total.....	\$20,802 57	\$32,423 83	\$7,766 94	\$60,993 34
Annual average. ...	\$4,160 51	\$6,484 76	\$1,553 39	\$12,198 67

Grounds, Area, etc.

The total water area of the counties in which scraping is authorized is 510 square miles, and the area used by the scrapemen 277, of which the area more or less covered with natural oyster-ground approximates eighty square miles. The following tabular statement exhibits these data for each of the three counties :

COUNTIES.	Water area.	Scraping area.	Reefs in scraping area.
	<i>Sq miles.</i>	<i>Sq. miles.</i>	<i>Sq. miles.</i>
Somerset.....	183	112	39
Dorchester.....	207	118	26
Talbot.....	120	47	15
Total.....	510	277	80

The depth of water over these reefs averages about thirty-two feet, although in isolated places it may attain 100 feet. The general condition of the reefs in the three estuaries in which this fishery is prosecuted, viz., Tangier Sound, Choptank River, and Eastern Bay, have already been noted (see pp. 243-246-247). During the last five seasons the scraping areas

have been in much better condition than the dredging-grounds, this being particularly true of the Choptank River, and they are naturally more productive than the tonging areas. During the last eight years no branch of the oyster fishery has been more prosperous than this, and its extent during the last four seasons has been far greater than ever before. The average annual product of all the scraping-grounds of the State during the last five seasons has been about 3,250,000 bushels, an average of 40,625 bushels to the square mile. Of this amount about 500,000 or more bushels annually have been obtained by dredging vessels working at the time under scraping licenses.

Boats and Vessels.

The boats and vessels employed in scraping number about 1,250, all of which are propelled by means of sail. They comprise the various types utilized in the tonging and dredging branches of the oyster fishery. As a general thing they are larger than those used in tonging, and smaller than those engaged in dredging. The total value of those in use in 1892-93 approximated \$650,000.

In Talbot and Dorchester counties no vessels measuring over ten tons are permitted to engage in this branch of the oyster industry, while in Somerset no restrictions are placed upon the size of the vessels employed, and nearly one-fifth are over ten tons measurement. The average size of the craft in the two former counties is about seven tons, and in Somerset it is 8.77 tons. The number of vessels engaged in scraping in this county in 1892-93 and measuring over ten tons was 119, the tonnage of which was 2,087.23, an average of 17.53 to the vessel; and the number under ten tons was 528, the tonnage of which was 3,117.99, an average of 5.91. Each one of the vessels measuring over ten tons was required to obtain license to dredge in "State waters," in addition to their county scraping license, before being authorized to scrape in the waters of Somerset. The largest vessel engaged in this branch of the fishery in that county in 1892-93 was the *Edna Earl*, which measured 40.76 tons.

The limit on the size of the vessels permitted to scrape in Dorchester and Talbot counties has had a peculiar effect on the size and model of those employed, the dimensions, which largely increase the tonnage of the vessel under the present form of measurement, as depth and breadth, being reduced as much as practicable. And it is stated that resort is also had to "dunnage" and other methods for reducing the measurement within the legal limit, and that vessels are employed in those counties which, if built upon ordinary lines and models, would measure twelve or even fifteen tons.

The same complaint with respect to "dunnage," etc., prevails to a certain extent in Somerset, for, while no limit is placed upon the size of the vessels permitted to be used in that county, yet, if the vessel measures over ten tons, it is required to obtain, in addition to the scraping license, a State dredging license at the rate of \$3 per ton. This, however, gives them also the privilege of dredging in the "State waters," which is of value when the reefs therein are producing more abundantly than the county reefs. In order to dredge in the "State waters" a number of the scraping vessels under ten tons also, during certain seasons, obtain a dredging license. In 1891-92 the number of vessels doing this from Somerset was eighty, from Dorchester twenty-two, and from Talbot nine. These, together with the Somerset vessels measuring over ten tons, make a total of about 220 of the 1,250 scraping boats and vessels employed also in dredging.

The Scrapemen.

Except on the large vessels owned in Somerset county, the men employed on the boats and vessels engaged in the scraping branch of the oyster fishery are quite similar in characteristics and social standing to the tongmen. They mostly reside in houses along the shores of the waters where they operate. Some of them, during the close seasons, engage also in farming or in other industries prosecuted in their native counties, which give opportunity for a few days' employment at odd times. They usually return to their homes every night, and

their boats do not frequently leave the waters in which they work, the catch being either delivered at the adjacent marketing houses or sold to the transporting vessels.

The men employed on the large vessels from Somerset county differ in little respect from those engaged in dredging, and are subject to the same regulations with reference to employment as provided by act of 1888, ch. 513.

Oyster-Culture in Maryland.

The various modes by which the natural oyster-reefs in Maryland are being utilized have been discussed, and the attempts that have been made to utilize the barren areas now remain to be described. Little in this line has been done in Maryland, and that little has been almost entirely confined to the bedding or planting of small oysters on a few restricted areas, and with much uncertainty of harvesting a crop. Its extent is so inconsiderable that it is scarcely a factor in the oyster industry of the State. Innumerable efforts have been made to enact a system of regulations properly authorizing and encouraging ostreiculture, but these efforts have fallen far short of their aim.

The experience in Maryland in this respect has not been peculiar, for the course of ostreiculture has never run smooth. The very first operations in this line of which we have any knowledge met with opposition from persons who considered them an encroachment upon public appanage. These operations were prosecuted in Rome about two thousand years ago, and Pliny, who wrote much concerning oysters, makes the following reference to them:

The first person who formed artificial oyster beds (*ostrearium vivoria*) was Sergius Orata, who established them at Baiæ in the time of L. Crassus, the orator, just before the Marsia War (*cir.* B. C. 95). This was done by him, not for the gratification of gastronomy, but of avarice, as he contrived to make a large income by this exercise of his ingenuity. * * * He was the first to adjudge the pre-eminence for delicacy of flavor to the oysters of Lake Lucrinus, for every kind of aquatic animal is superior in one place to what it is in another. * * * The British shores had not as yet sent their supplies at the

time when Orata thus ennobled the Lucrine oysters. At a later period, however, it was thought worth while to transport oysters all the way from Brundisium, at the very extremity of Italy; and in order that there might exist no rivalry between the two flavors, a plan has been recently hit upon of feeding the oysters of Brundisium in Lake Lucrinus, famished as they must naturally be after so long a journey.*

A certain Considius thought, however, that Orata was encroaching too much on public property in his operations on the shores of the lake, and the latter was compelled to resort to the courts to defend his created industry.

It is apparent that the early legislators of Maryland had some conception of the possibilities of extending the oyster industry by encouraging private enterprise in planting; for the legislation on this subject dates back to 1830, this being the third State of the Union to recognize private ownership in planted oysters. This recognition was provided in an act dated February 16, 1830, (L. 1829-30, ch. 87.)

This act, the groundwork of all subsequent legislation in Maryland on this subject, was in substance as follows: Any citizen of the State was authorized, under certain regulations, to appropriate in any of the bays or creeks situated within the county of which he was a resident an area or areas, not exceeding one acre in extent, for his exclusive use in planting or growing oysters or other shellfish, the said location to be not an oyster bed and to be distinctly defined by stakes or other proper marks, and to be described under oath, said description to be recorded in the office of the clerk of the Circuit Court of the county. The right to the location ceased on the failure of the pre-emptor each year to deposit thereon "sufficient oysters or other shellfish to preserve the growth of the bed." The owner of lands bordering a creek not exceeding 100 yards in width, was also given exclusive right to use the same for a similar purpose; and the unauthorized removal of oysters from any of these pre-empted areas was declared a misdemeanor.

*Nat. Hist. Vol. vi, page 469, ed. Bohn.

While New Jersey and Rhode Island were in point of time ahead of Maryland in authorizing the planting of oysters, yet the regulations adopted by the latter conform more to the present recognition of the needs of a planting industry.

The following list of dates showing the time of the recognition or granting by legislative enactment in each of the United States of some form of private right in planted oysters is of interest:

Rank.	STATE.	Date.	Reference.
1....	New Jersey	1820, June 9.....	L. 1820.
2....	Rhode Island.....	1827, October	L. 1827, ch. 5.
3....	Maryland.....	1830, February 16...	L. 1829-30, ch. 87.
4....	Connecticut.....	1842, June 10	L. 1842, ch. 38.
5....	Massachusetts.....	1845, March 17.....	Private L. 1845, ch. 138.
6....	South Carolina.....	1847, December 17...	L. 1847-48, ch. 3024.
7....	Delaware.....	1849, February 28...	L. 1849, ch. 414.
8 ..	Virginia.....	1849, March 16.....	L. 1848-49, ch. 125.
9....	Maine.....	1849, August 15.....	L. 1849, ch. 142.
10 ..	California.....	1852, April 28.....	L. 1851-52, ch. 117.
11....	Georgia.	1856, February 18...	L. 1855-56, ch. 8.
12....	Mississippi.....	1856, March 11.....	L. 1856-57, ch. 95.
13....	New York.....	1859, April 18.....	L. 1859, ch. 468.
14....	Oregon.....	1862, September 27...	L. 1862.
15....	Alabama.....	1872, February 28...	L. 1871-72, ch. 28.
16....	Washington.....	1873 November 5...	L. 1873.
17....	Texas.....	1879, March 8.....	L. 1879, ch. 28.
18....	Florida.....	1881, January 29...	L. 1881, ch. 3615.
19 ..	North Carolina.....	1883, March 9.....	L. 1883, ch. 332.
20....	Louisiana.....	1886, July 8.....	L. 1886, ch. 106.

There are official records in many of the Maryland counties, and particularly in Somerset, indicating that some of the residents immediately availed themselves of the privilege of pre-empting planting-grounds, but no data exist to show that the planting attained any commercial extent.

In 1842 (L. 1841-42, ch. 270,) further provision was made for oyster-planting in this State, and citizens owning lands lying on any navigable waters, the lines of which included any cove or portion of such waters not navigable by licensed vessels, were given absolute right to all deposits of oysters or other shellfish that might be made by them thereon, and by

act of 1846 the provisions of this law were extended so as to cover navigable waters similarly situated.

In 1843 (L. 1842-43, ch. 4) an act local to Worcester county was passed authorizing any resident of that county to pre-empt two acres of ground in Parker bay, situated within the limits of Worcester county, and after having said area properly surveyed and the notice of pre-emption recorded among the county records, to hold the same for planting oysters or other shellfish for a period of five years from the date of the act; and persons unlawfully removing oysters from such pre-empted areas were guilty of theft. But in 1845 (L. 1844-45, ch. 163) the foregoing act was repealed and in 1846 (L. 1845-46, ch. 40) an enactment was passed identical to the one of 1843, except that the limit of pre-emption was fixed at one acre instead of two.

The act of 1865 (ch. 161), by which was adopted the oyster-license system, affected to some extent the planting regulations by increasing the limit of pre-emption to five acres, but it required the pre-emptor to be a resident land-owner. Thus each of the three provisions authorizing persons to plant oysters required the pre-emptor to be the owner of lands on the foreshores. But in 1867 the provision authorizing the pre-emption of five-acre lots was extended (taking effect January 1, 1868) to any citizen without reference to his ownership of lands bordering the water.

As the regulations expressly forbade the pre-emption of natural reefs, many locations after being planted on at much expense were, even after a lapse of two or three years, claimed by the oystermen to be natural beds, and were thereupon thrown open for the use of the public. This resulted in some hardships and in much ill-feeling between the planters and the neighboring oystermen. In order to remedy this the General Assembly provided in 1874 (ch. 181) that six months' peaceable and legal possession should constitute a good and sufficient title to the ground so far as was authorized by previous enactments, even though such location should be a natural

reef, and in 1884 peaceable possession for twelve months was required.

By act of 1876 (ch. 277), an exception was made to the general planting law and each citizen of Worcester county was authorized to pre-empt of the barren grounds within the waters of that county an area not exceeding five acres for oyster planting purposes, and to hold the location by keeping it plainly marked with bushes, stakes or buoys, without being required to record a description thereof.

The act of 1890 (ch. 269) provided an elaborate planting law for Somerset county, in which the appointment was authorized of a body to be known as "oyster commissioners," who should, when requested so to do, examine and determine whether a desired location is a natural oyster-reef. Further provision was made in reference to fees to be paid, transfer of title, etc., also the following: "It shall not be lawful for any person or persons to locate or appropriate any water or bottom thereunder for the purposes set forth in this act, where the said bottoms are grassy or suitable for the catching of crabs." But this entire act was repealed at the next session of the General Assembly (L. 1892, ch. 662), and the general planting law was re-established in that county.

It was provided by act of 1888 (ch. 505), that in case of the death of the pre-emptor of a lot, his executors or administrators should have exclusive use of the location for three years. Prior to that enactment the lot and the oysters thereon reverted to the public immediately on the death of the owner so far as the law was concerned, but in practice more humanity prevailed. A regulation local to Kent and Queen Anne's counties was enacted in 1890 (ch. 333) permitting a pre-emptor in case of insolvency to assign his lot for a period of three years. Except under one of these two provisions no authority at present exists for a transfer of title to an oyster-planting lot in Maryland.

From a perusal of the foregoing it is observed that the only changes of material value made in the planting regulations of

this State since the original enactment of sixty-three years ago is an extension of the pre-emption limit from one to five acres.

Except in Worcester County, in which the previously mentioned local enactment of 1876 is in force, the oyster-planting law now operative in Maryland is as follows:

The owner of any land bordering on any of the navigable waters of this State, the lines of which extend into and are covered by said waters, shall have the exclusive privilege of using the same for protecting, sowing, bedding, or depositing oysters or other shellfish within the lines of his own land; and any owner of land lying and bordering upon any of the waters of this State shall have power to locate and appropriate in any of the waters adjoining his lands one lot of five acres for the purpose of protecting, preserving, depositing, bedding or sowing oysters or other shellfish; any male citizen of full age of this State shall have power to locate and appropriate and hold one lot of five acres, and no more, in any waters in this State not located or appropriated: Provided, Thirty days' notice, in writing, shall be given the owner or occupant of land bordering on said waters proposed to be located, that the owner or occupant may have priority of claim; and if such owner or occupant shall fail to locate or appropriate the water mentioned in said notice within thirty days after receiving the same, then it shall be open and free to anyone, under the provisions of this section: Provided also, That the said location or appropriation shall be described by stakes, bushes, and with the name of the owner on a board fastened to a pole or stake on or within the appropriated oyster land, or by other proper and visible metes and bounds, which description shall be reduced to writing, under the oath of some competent surveyor, and recorded at the expense of the party locating or appropriating the same, in the office of the clerk of the Circuit Court for the county wherein such land may be located: And provided also, That such location and appropriation shall not injure, obstruct, or impede the free navigation of said waters: And provided, That no natural bar or bed of oysters shall be so located or appropriated, and that twelve months' peaceable possession of all location of oyster-grounds under the laws of this State shall constitute a good and sufficient title thereto; but should anyone within twelve months be charged with locating or appropriating any natural bed or

bar hereinbefore prohibited, the question may be at once submitted by any person interested to the judge of the Circuit Court for the county where such question shall arise, who, after having given notice to the parties interested, shall proceed to hear the testimony and decide the case; and if his decision be in favor of the party locating said five acres, said decision shall be recorded with the original record of said five acres, and shall in all cases be conclusive evidence of title thereto: Provided also, That if any stakes or bushes used as bounds shall be removed by accident or design, it shall not excuse any person from wrongfully taking such oysters if he knew the grounds to have been located and appropriated; but any title or pretended title to more than five acres, or otherwise contrary to this section, held or claimed by any person, is hereby declared to be fraudulent and void: Provided, That no non-resident of this State shall be entitled to avail himself of the provisions of this section, whether he be sole or part owner of any land in this State; and in case of the death of any citizen who may have located and appropriated any lot under the provisions of this section, his executors or administrators shall have the exclusive use, possession and control of such lot as fully as the person so dying had for the purpose of protecting, cultivating and removing the oysters planted on said lot for the period of three years from the date of the death of the person appropriating such lot; and any person committing a trespass upon said lot, or taking oysters bedded thereon, without the consent of such executor or administrator, shall be liable to the penalties imposed by this article for taking bedded oysters.

If any creek, cove or inlet, not exceeding 100 yards at low water in breadth at its mouth, make into the lands, or if any creek, cove or inlet of greater width than 100 yards at low-water mark, make into the lands, the owner or other lawful occupant shall have the exclusive right to use such creek, cove or inlet when the mouth of said creek, cove or inlet is 100 yards or less in width; and when the said creek, cove or inlet is more than 100 yards in width at its mouth at low water, the said owner or other lawful occupant shall have exclusive right to use such creek, cove or inlet so soon as said creek, cove or inlet, in making into said land or lands, shall become 100 yards in width at low water, for preserving, depositing, bedding or sowing oysters or other shellfish, although such cove, creek, or inlet may not be included in the lines of any patent; and

in all such cases such right of the riparian proprietor shall extend to the middle of such creek, cove, or inlet.

That it shall be unlawful, without authority from the owner, for any person or persons to take or catch planted or bedded oysters, knowing them to be so planted or bedded, or to remove, break off, destroy, or otherwise injure or alter any stakes, bounds, marks, buoys, or other designation of any said beds; any person or persons violating the provisions of this section shall be guilty of a misdemeanor, and on conviction before a Circuit Court or a justice of the peace for the county where the oysters were bedded, shall be fined not less than \$10 nor more than \$200, or be sentenced to the house of correction for a term of not less than three months nor more than one year, at the discretion of the judge or justice trying the same.

Planting Lots Pre-empted.

Prior to the enactment of 1867, comparatively few pre-emptions of lots had been made either under the one-acre law of 1830 or the five-acre law of 1865, and the title to most of those had been permitted to lapse. It is doubtful if more than 350 acres had been located in the State at the time of the aforementioned enactment. Some of the lots were located as early as 1830, this being the case in Somerset county particularly, while in Worcester county the greater number of the pre-emptions were made between 1840 and 1850. Immediately following the adoption of the five-acre regulation of 1867, and each year thereafter, a number of locations were and have been made.

The scene of the most extensive oyster-planting in Maryland is not in the Chesapeake region, but on the shores of Worcester county in the Sinepuxent bay. This is the only water area in Maryland not tributary to the Chesapeake, being on the ocean side of the Eastern Shore or "Mavirdel" peninsula, and emptying directly into the ocean. The planting of oysters in these waters originated on a small scale in 1842; but the extent on which it was then conducted was almost insignificant, the product being utilized entirely in the local trade.

The following table, compiled from the various county records, exhibits the area of ground pre-empted during each year in each of the counties of the State :

Table exhibiting by counties the number of acres of oyster-planting ground pre-empted annually in Maryland.

YEARS.	Somerset.	Wiconico.	Dorchester.	Talbot.	Queen Anne's	Kent.	Anne Arundel.	Calvert.*	St. Mary's.	Charles.	Worcester.†	Total.
1868 and prior....	237	....	40	35	....	....	....	....	24	..	80	416
1869.....	61	....	9	3	....	....	....	....	8	....	....	81
1870.....	159	....	18	7	5	....	15	....	12	....	....	216
1871.....	369	....	243	....	....	....	....	....	16	....	....	628
1872.....	131	....	58	35	....	....	....	....	12	....	....	236
1873.....	118	..	36	49	24	....	....	....	32	..	2	261
1874.....	106	....	27	42	5	....	....	....	24	..	2	206
1875.....	86	10	99	7	10	....	....	....	4	....	....	216
1876.....	106	5	9	3	8	....	....	....	8	....	....	139
1877.....	168	5	....	3	....	....	....	....	12	....	....	188
1878.....	12	2	31	....	39	....	10	....	....	....	....	94
1879.....	159	5	108	3	....	....	19	....	28	....	....	322
1880.....	24	97	54	21	110	..	5	....	53	....	....	364
1881.....	....	60	144	63	5	....	....	....	12	....	....	284
1882.....	....	..	42	31	....	....	11	20	94	....	....	198
1883.....	20	35	27	24	7	4	13	42	53	....	....	225
1884.....	266	....	31	10	....	..	24	20	86	....	....	437
1885.....	377	84	40	3	3	5	12	10	4	....	....	538
1886.....	426	65	45	7	....	..	4	12	4	....	....	563
1887.....	131	64	....	7	....	11	17	....	8	....	....	238
1888.....	32	25	18	10	....	..	15	....	16	....	....	116
1889.....	36	50	40	7	5	5	8	....	12	....	....	163
1890.....	82	....	180	21	15	..	16	89	28	....	....	431
1891.....	336	40	130	45	56	14	28	113	12	....	....	774
1892.....	167	30	325	32	23	20	8	50	20	..	....	675
Total.....	3,609	577	1,754	468	315	59	205	356	582	..	3,084	11,009

Notwithstanding all this ground was ostensibly pre-empted for the planting of oysters, only a small part of it is now in

* Records of Calvert county prior to 1882 were destroyed by fire.

† About 3,000 acres held under law of 1876, ch. 277, without filing papers.

actual use for that purpose. In fact, a large portion of it has never been used for planting purposes and was not appropriated with that object in view, many lots being located by the owners of the adjacent estates in order to prevent outsiders from operating on the margin of their property.

Some of the lots have, through error or otherwise, been located two or more times, and the descriptions filed are not always such as would give a surveyor a correct understanding of their locations, they frequently surrounding the lots with almost every impossible engineering description.

About 1875 the rapidly diminishing product of the public beds in these waters led to an extension of the planting industry, which quickly increased until 1880, which was probably the most successful season known in the planting industry of the county as regards the profits of the persons engaged. From that time the industry decreased in extent because of the increasing mortality each year among the oysters planted. This may have been due to some extent to their overcrowded condition and a lack of sufficient food, but more likely to the malaerated condition of the water and the large amount of vegetable and mineral sediment in the bay.

The industry is still prosperous and conducted with as much energy, although probably not with so much care, as in any of the northern States. The seed oysters are obtained from the natural reefs in this county, the ocean shore of the counties of Accomac and Northampton, Virginia, and the tributaries of the Chesapeake. The cost, delivered on the grounds, ranges from fifteen to forty-five cents per bushel, according to the quality and the locality whence obtained. About 250 to 550 bushels are planted to the acre, and they are permitted to remain from one to three years. While each person is authorized to pre-empt only five acres of ground, yet a number of the members of a family or of a community unite and obtain a sufficient area for engaging in the industry on a profitable scale. The annual product of that part of the bay situated in Maryland has averaged during the last six years about 135,000 bushels annually, at 90 cents per bushel clear.

The extent of the product varies much from season to season, and in 1887-88 and 1889-90 was more than twice the average, the product during each of the two seasons named being about 200,000 bushels, at \$1 per bushel. In 1891-92 the yield was 86,000 bushels, and in 1892-93, 105,600 bushels. These oysters usually go upon the markets as "Chincoteagues" or "Parker Bays."

There exists a regulation local to Worcester county in respect to the pre-emption of planting areas, that is, I believe, without a parallel in any part of the world. This regulation is in substance as follows: If through ignorance or mistake the locator of a planting lot should pre-empt a natural oyster-reef, the County Commissioners are required, upon sworn information thereof being presented to them, to appoint three disinterested men to go with the locator, examine the lot, and report under oath relative to the same. If in the pre-empted area a reef more than twenty feet square in any one place be found, they shall value the same, and the locator shall pay the valuation to the county, and also the expenses of the examining committee, the latter not to exceed \$10; but if no reef more than twenty feet square be found, the expenses of the committee shall be paid by the informer.

The utmost harmony, however, prevails among the oystermen of that region, and their operations are guided as much by public sentiment as by the statutes; hence no advantage has been taken of the opportunity here presented by collusion with one another for obtaining the natural reefs of that county.

In the Chesapeake region of Maryland, bedding is practiced more extensively in the Patuxent river than elsewhere. The "plants" are obtained from the public reefs in that river and are permitted to remain on the private areas for a few weeks or months, being deposited during a dull season and taken up when the oyster market is strong. Occasionally, however, they may remain on the private grounds for a year or more. The object in bedding is not so much to increase the size or condition of the oysters as to obtain a better market; and the ex-

pressions "storing" and "dumping," sometimes heard in the Chesapeake, express better than "bedding" the operations in this river. The quantity of oysters removed from these areas may approximate 100,000 bushels annually, but this is a product of the public reefs rather than of the planting lots.

While the pre-emption of oyster-planting grounds in the Tangier and Pocomoke regions dates back to 1830, yet the bedding of oysters has never been vigorously or extensively conducted there, and what has been done was on an experimental rather than industrial scale.

In Fishing bay, on the southern shore of Dorchester county, the bedding has been of noticeable extent since 1871. The seed oysters, which are obtained from Tangier sound and tributaries, cost from ten to twenty cents per bushel, and are permitted to remain one or two years. There is much complaint, however, that the risks from loss by unauthorized removal are very great, and there is little doubt that this practice has been of extreme detriment to an extension of the business.

Pre-emptions were made in Somerset county as early as 1830, and occasionally oysters would be bedded on the areas located, but usually for only a few weeks. From 1870 to 1875 a number of persons were sufficiently interested in the subject of oyster-planting to attempt to make more extensive use of their lots, but little resulted from it. In 1884 and 1885 the subject was again revived in this county, and scores of lots were located. Those persons making use of their reservations planted the small oysters of Tangier sound, costing, delivered on the beds, ten or fifteen cents per bushel, the size of the oysters ranging from that of a twenty-five-cent piece up to a silver dollar, but, being the "run of the rock," were mixed with considerable shells and debris. Col. Thomas S. Hodson, of Maryland, has furnished the following data in reference to these operations:

By October 1, 1885, the small oysters bedded in March of that year had become sufficiently large for shucking purposes,

ranking as "straight-ups," with from one-fourth to one-third "selects" among them, worth thirty cents per bushel on the ground, while the quantity had increase threefold. Could they have remained another year, so as to acquire their full size, the profits to those who had planted them would have been very great. But an organization had been formed which determined to put an end to this new source of labor and profit. Some persons went in a body upon John H. Whealton's bed and began to take the oysters, but he opened on them with a shotgun, and the attempt soon ended. They took a few of the oysters bedded by James C. Nelson, who begged them to desist, which they soon did. A suit was instituted to vacate a certain lot as a natural oyster bed, on the ground that wherever scattering oysters could be found, it was a natural bed. The court, however, found that there were less than 100 bushels on the five acres, and dismissed the suit.

As a consequence to the hostility thus exhibited, the planters determined to immediately realize on the oysters they had bedded, instead of waiting for a larger profit during the second season. They therefore hired men to take them up, paying ten cents per bushel therefor, thus employing much labor that would otherwise have been idle. Some of the planters did very well. Mr. Green took up 1,700 bushels in December, and sold them for sixty-two cents per bushel. Mr. James C. Nelson and Mr. R. N. Horsey, using a portion of ten acres in Pocomoke sound, have furnished the following statement of financial operations on that area in 1885-86:

Amount paid for 5,500 bushels seed oysters, planted March, 1885,	
at 10 cents per bushel, delivered.....	\$550 00
Paid for taking up and marketing oysters in 1885-86....	630 00
Total.....	<u>\$1,180 00</u>
Received from oysters sold in December, 1885.....	\$1,403 50
Received from oysters sold in spring, 1886.....	277 00
Total.....	<u>\$1,680 50</u>
Profit in 12 months....	\$500 50

After the oysters were sold in Crisfield, about \$600 was paid for shucking them, and as all public-reef oysters obtainable were then being purchased to fill orders, this \$600 was so much that the laboring class would never have received had these men not planted an oyster. Thus, from a little lot of \$550 worth of oysters, the labor around Somerset county received for oysters planted, \$550; for taking up oysters, \$630; for shucking, etc., \$600; total, \$1,780. Since then fewer persons have planted oysters, and the majority of those have lost so heavily by depredations, during the daytime as well as at night, that they are almost discouraged.

An interesting attempt was made in 1890 by Messrs. C. A. DuBois & Co., oyster-dealers of Annapolis, to grow oysters on ten acres of very muddy ground situated in the Severn river, in Anne Arundel county; and during June of that year about 5,000 bushels of oyster shells were planted, at a cost of \$250. A set was obtained on these shells during the ensuing spawning season, and in the winter of 1891-92, about 3,000 bushels of oysters were taken from this area and marketed at forty-five cents per bushel, and about 500 bushels were left on the bed to be removed later. In 1891, 5,000 bushels of shells, and in 1892, 10,000 bushels, were planted on this area, but the set obtained was very poor.

The areas of ground situated within creeks less than 100 yards wide, or within the lines of other property along the foreshores, is exceedingly small, and the bedding of oysters in those areas is so insignificant in extent, when compared with the extensive common oyster fishery of the State, scarcely as to merit attention. A few such areas are situated in St. Mary's and Calvert counties, and probably some in Talbot, Dorchester and Somerset counties; but the quantity of oysters marketed from those private holdings scarcely exceeds 25,000 bushels annually, and nearly all of that was originally obtained from the public reefs.

It is thus observed that, except what is done in Dorchester county, even the simplest and most primitive modes of oyster-culture, the planting or bedding of small oysters, is an almost

entirely undeveloped resource in Maryland. And in no sense of the word, as used at present, is the small bedding done in the Chesapeake a cultivation, and the expression, "storing" or "dumping," well illustrates it. A farmer may as well plant his corn without first having prepared the ground, and then, without further care or attention or protection from birds or other animals, expect to gather a harvest. He will be fortunate if able to gather as much corn as he planted; and so may the oysterman, if able to take up as many oysters as he deposited.

Among the factors that have retarded the development of oyster culture in this State might be mentioned the following: The area that a person is permitted to hold is so small that under the most favorable conditions the planter can afford to devote only a small portion of his time to it; the tenure is very uncertain and liable to be affected without notice by a change in the law or the administration thereof; the distinction between a natural reef and a barren bottom is so indefinite that after much attention has been paid to a lot, it is likely to be declared a natural reef, and as long as this condition of the ground is debatable, planting thereon is an enterprise of great risk. It requires an investment of energy and labor to properly engage in oyster-culture, and these hesitate to touch the lots under the present impossibilities of enlargement and the insecurity of tenure. The uncertainty as to what are natural grounds has also encouraged certain persons to attempt to locate areas popularly supposed to come within that classification, in the hopes that under cover of the general sympathy being aroused in favor of the planters, their scheme may prove successful.

What is desired is that the General Assembly, directly or indirectly, determine specifically and precisely, by metes and bounds, what areas are open for location; permit the pre-emption of sufficient area to justify a person in devoting his attention to it, and settle the tenure for a specified period of time.

But there is a trouble greater than all the foregoing factors combined, and that is a lack of protection to the oysters from

being removed by persons refusing to recognize private ownership in bedded oysters. The lots are so small that they do not warrant the expense of the watchmen employed in other planting localities. Practically, all the oysters may be removed from a lot in one night, and it is almost impossible to convict the offenders, it not being possible to identify the stolen goods. If apprehended and arrested and the removal of the oysters proven, a question then arises as to the location being a natural reef. But even if the offender be convicted, which is not usual, he is guilty only of a misdemeanor and may escape with a fine of from \$20 to \$200, while the value of the property obtained may have been many times that amount.

Confronted by these conditions, the oystermen who would otherwise engage in planting prefer to sell their small oysters for whatever they may bring, rather than risk the uncertainties of harvesting a planted crop and endure the accompanying contentions with their neighbors.

The planting law of Worcester county is quite similar to that operative in the Chesapeake region. The area of pre-emption is limited to five acres; the planters have no security of tenure, and they do not locate natural reefs. But there is this distinctive difference, the person unlawfully removing oysters from private areas in that county is guilty of felony, punishable with imprisonment in the penitentiary for from one to two years. And under the good influence of this provision, backed by a popular sentiment favorable to the planters, much of the bedding resources of the waters of that county are utilized, notwithstanding the small encouragement given by the General Assembly.

The State as an Oyster Farmer.

The feeling is current among certain classes in Maryland that if the cultivation of oysters within the waters of that State be practicable, the work should be undertaken by the State at large or by counties, for the benefit either of the people of the State in general or of the counties respectively. Giving practice to this theory, a number of procedures have

been authorized by the General Assembly for improving the productiveness or increasing the area of the public beds.

The first attempt in this line was made in 1874 (ch. 77), when the County Commissioners of Worcester county were authorized to expend all the revenue derived from the issuing of tonging licenses in that county in the purchase of seed oysters to be planted in the Sinepuxent bay. The total amount of revenue derived from this source up to the present time has amounted to \$4,690, but only a portion of it has been devoted directly to the purposes noted, and this mainly for planting small seed or the "run of the oyster rocks" during those years immediately following the enactment, the County Commissioners being merely authorized and not required to purchase the seed oysters. During recent years few oysters or shells have been bedded on the public reefs by that county, the money being expended indirectly for the benefit of the oyster industry, as in cutting a canal, the building of necessary landing facilities, etc. The revenue from this source is a sort of a contingent fund upon which to draw when special public expenditures are deemed necessary for the good of the oystermen.

By act of 1884, (ch. 255) the County Commissioners of Somerset county were authorized (but not required) to utilize the revenue derived from the issuing of scraping licenses in that county to vessels measuring over ten tons, in the purchase and planting of shells on the public grounds within the county limits. The said commissioners were also empowered to make such regulations as might be necessary to protect the areas so improved; and it was further provided, that "in case the General Assembly shall provide for the sale or lease of oyster-grounds, for the propagation of oysters, the said County Commissioners may buy or lease the said waters of said county for the use of the people thereof." This was a very ambitious undertaking, and except the very small operations in Sinepuxent bay during those years immediately following 1874, as just noted, but which do not furnish a comparison, it was and is yet without a parallel in any part of the world—the annual

expenditure of a large sum of public money in the cultivation of oysters on the public domain for the use of a common fishery. The sum available for this purpose then amounted to about \$4,000 annually, but was rapidly increasing, and the area of the ground upon which operation was authorized approximated 180 square miles, covered with sixty square miles of oyster beds. The authority given the County Commissioners at their discretion to permit or interdict oystering on the improved reefs is particularly noticeable, especially when it is considered that that is the principal oyster region of the greatest oyster-producing estuary in the world, and that in no other locality in America are the inherited privileges or customs of the common fishery more zealously guarded.

An effort was made by the county officials to properly enforce the intentions of the enactment. Quantities of shells were planted and a special police was provided for protecting the areas improved. But within a few months the County Court expressed an *obiter dictum* that the provision for excluding the oystermen from those areas was not sufficiently explicit, and the police protection was withdrawn. At the next session of the General Assembly (1886) the law was amended so as to meet the views expressed by the court; but in the meantime a change had been effected in the personnel of the County Commissioners, and the new board, using their discretion in the matter, as the law permitted, failed to exercise the authority given them. In 1888, the regulations, which had then been inoperative for three years, were repealed by the Assembly.

By act of 1886, (ch. 314) an appropriation of \$5,000 was made to be used by the commander of the State fishery force in the purchase and depositing of shells, in May and June of that year, in such places in the Chesapeake as that official might deem suitable for the purpose of obtaining thereon a "set" of oysters. For some cause the planting was delayed until the latter part of June, and as the spawning season was then almost over, the undertaking was not a success. Indeed, had the shells been planted earlier the result might have been

practically the same, for the set obtained in other portions of the bay during that year was not abundant. This was intended only as an experiment and not as the inauguration of a State policy. A similar experiment made by the State of Delaware in 1891, at an expense of \$2,000, has, it is reported, resulted very satisfactorily.

Transporting.

The centering of the oyster trade for convenience of labor, shipment, etc., at Baltimore or other populous or railroad points, the location of the reefs many miles distant in the lower and tributary waters of the bay, and the necessary use of many small boats in the fishery, require the employment of a large number of vessels for transporting the catch from the reefs to the marketing houses. As the State has exercised no supervision over these vessels, the data at hand for exhibiting the extent of this branch of the oyster industry are incomplete. As no license and no peculiar facilities other than those employed by vessels engaged in general coasting trade are required, a number of vessels engage in transporting oysters for only a short time during the busy part of the season, and estimates are therefore likely to differ considerably.

In 1880, Mr. R. H. Edmonds, whose report has already been referred to, estimated that 200 vessels, employing 800 men, were engaged in transporting oysters in Maryland. But this was probably very much less than the actual number, as will be seen from the following incident: In 1884 (ch. 518) a law was enacted requiring all vessels engaged in transporting oysters to obtain a license on the same terms and conditions and at the same rate (\$3 per ton) as was required of the vessels engaged in dredging, and a tax of three cents per barrel was imposed on all steamers carrying oysters while engaged in a regular freighting business. Of the transporting vessels, 353, not engaged in dredging, paid the fees in order to continue the trade. A few vessels, however, opposed the payment of the tax, and their case being taken to the courts, the law was declared unconstitutional, and the fees paid by the other

transporters, amounting to \$27,644.15, were refunded. This indicates that there were about 400 transporting vessels during that season. The increasing number of market houses at the ports down the bay and near the reefs, competing with and naturally decreasing the oyster trade of Baltimore, has during the last eight or ten years resulted in a corresponding decrease in the number of transporting vessels. But during the last three years the decreasing extent of the dredging industry, together with the large quantity of oysters taken by the tongmen and scrapemen, has resulted in an increase in the number of the transporting vessels. In 1889-90 the number was 351, the tonnage of which was 11,801.43. In 1890-91 this was increased to 399, with a tonnage of 13,111.45, and in 1891-92 it was further increased to 456, with a tonnage of 15,067.29, nearly equaling the tonnage employed in dredging.

The transporting vessels differ little from those employed in dredging. There are no very small craft among them, and their average measurement is much greater than that of the dredging vessels, the tonnage of the former being about 33.5 tons, and of the latter about 22 tons. The largest of the transporters are the *E. S. Johnson*, 85.7 tons, built in 1882, and the *Clemmie Traverse*, 81.05 tons, built in 1885. The average value of the transporting vessels is about \$1,525; the original cost, however, was about twice that amount. During the summer the greater number of these vessels are engaged in transporting farm produce and general freight to and from various points along the shores of the bay and tributaries. The fluctuations from year to year in the number of vessels transporting oysters is to some extent governed by the prosperity of the dredging industry. If that branch of the oyster fishery gives indications of being profitable during a certain season, a large number of vessels obtain a license and engage in dredging; if the contrary be the case, the vessels are confined to transporting.

The men employed on the transporting vessels are usually residents of the State, and in most cases depend upon the freighting trade of the Chesapeake bay for a living. The

captain is usually on shares, and clears about \$40 to \$80 per month, while the laborers are on wages, receiving from \$20 to \$30 per month and board. The transportation vessels are successful in obtaining much better crews than the dredging vessels.

The captains of the transporting vessels purchase the oysters outright from the men catching them. The "buy boats" lie at anchor near the fishing fleet, with a basket at the masthead, or some other signal to indicate that oysters are being purchased, the latter being delivered as the oystermen finish their day's work. The profits made in transporting oysters are quite irregular, depending on the ability of the captains in striking a poor market "down the bay" and a good one in the city. During the cold weather in January, 1893, several vessels purchased oysters at seventy cents, and by paying heavy towage fees to Baltimore succeeded in obtaining \$1.45 per bushel. But this was very exceptional, the gross profits throughout the season averaging twelve to fifteen cents per bushel, an average for the fleet of about \$900 per vessel.

The following table exhibits the extent to which vessels have engaged in transporting during certain recent seasons:

YEARS.	Vessels.			Outfit.	No. of men.	Gross profits.*
	No.	Tonnage.	Value.			
1889-90	351	11,801.43	\$536,135	\$53,793	1,260	\$350,000
1890-91	399	13,111.45	569,000	59,190	1,444	370,000
1891-92	456	15,067.29	653,235	72,290	1,651	400,000

Transporting Trade with Other States.

The preceding data relative to the transporting branch of the oyster industry do not include the large number of vessels owned elsewhere than in Maryland, but engaging in transporting oysters from the waters of that State to other markets and

* This represents the enhancement in value of the oysters transported.

to planting-grounds. From 1840 to 1870 this trade was very extensive, Cape Cod and Connecticut vessels being the principal ones interested, but vessels from Philadelphia, New York, and elsewhere were also employed. Barnstable and Wellfleet, Mass., alone had about fifty vessels engaged in this trade. They cost about \$6,000, and carried about 2,500 bushels of oysters, four to eight voyages being made each spring. The transportation charges were about fifteen cents per bushel, but during the civil war they went up to twenty-five cents. It is reported that one Cape Cod captain made 138 oyster trips to the Chesapeake before he was forty years of age. This trade purchased oysters in Virginia as well as in Maryland.

These vessels now probably number sixty, averaging about fifty tons in measurement and \$3,000 in value, with five men to each. They are usually employed but a few weeks in the spring, and the number is not half of what it was fifteen or twenty years ago, as the extensive development of private oyster beds in Northern States and the constantly increasing prices of the Chesapeake oysters is rendering their northern planting unsuccessful from a financial point of view.

Some of these transporting vessels go around Cape Charles, and the remaining pass through the Chesapeake and Delaware Canal. No reliable data are available to show the extent of the trade through the "capes," but by courtesy of Mr. T. J. Cleaver, collector of the Chesapeake and Delaware Canal Company, I am enabled to present the following tabular statement, exhibiting for a period of years the quantity of oysters passing through that canal:

Chesapeake and Delaware Canal, east-bound shipments.

Year.	Bushels.	Year.	Bushels.
1880.....	939,600	1890.....	60,340
1881.....	485,385	1891.....	129,660
1882.....	650,100	1892.....	228,055
1883.....	552,227	1893.....	252,423

About one-half of these oysters pass through the canal during the last four or five weeks of the spring fishing. While a few

of them go at once into the food markets, by far the greater portion are planted on the private grounds in Delaware bay. Their average cost in Maryland probably does not exceed twenty-five cents per bushel, and at times it is very much lower than that, many vessels loading at fifteen and twenty cents per bushel. After remaining planted in the Delaware bay one or two years they are marketed at seventy-five cents to \$1 per bushel. As oysters can not be safely transplanted during cold weather their movement is delayed until spring, and the date of the beginning of the close season determines largely the quantity transported for planting, this being very much greater before the adoption of the close season on tonging than at present.

Capt. Samuel M. Travers, formerly commander of the fishery force, submits the following as an exhibit of the quantity of oysters shipped north for planting purposes during the spring of 1879:

Shipped from—	Bushels.
Tangier Sound and tributaries.....	353,750
Nanticoke River and Fishing Bay.....	125,000
Little Choptank River.....	125,000
Great Choptank River.....	375,000
Eastern Bay.....	62,500
Chester River.....	250,000
Anne Arundel shore.....	112,500
Patuxent River and tributaries.....	150,000
Potomac River and tributaries.....	625,000
Total.....	2,178,750

The average price paid is reported by him to have been seven cents per bushel.

In 1880 the beginning of the close season was changed to April fifteenth so as to restrict this trade, with the result of reducing it during the ensuing season to about 1,000,000 bushels. One of the chief objects of the present close time in the spring is the restriction it places upon this transporting of seed oysters from the State.

The Oyster Markets.

This branch of the oyster industry employs more capital than the fishery and about one-half as many persons. Baltimore is by far the most extensive oyster market in the State, as it is in the world. About thirty years ago the trade in the Chesapeake was almost exclusively centered in that city, but the increased railroad facilities at the smaller ports along the bay shores have led to the establishment of many markets nearer the reefs. Crisfield, although handling scarcely one-fourth so many as Baltimore, now ranks second in extent, and following in order are Cambridge, Oxford, Annapolis, St. Michael's, and many smaller places. Large quantities of oysters are also landed at other cities and towns situated on the tributaries of the Chesapeake bay and there sold to retail dealers and consumers without passing through large shucking-houses. Among these places may be mentioned Washington, D. C., Alexandria, Va., Easton, Port Deposit, Chestertown, Salisbury, and Pocomoke, Md.

The marketing trade is divided into three branches, viz., the shell-oyster or barrel trade, the raw-shucking trade, and the steaming trade. Of these the raw-shucking branch is the most important both as regards the quantity of oysters handled and the number of persons employed. Next in extent ranks the steaming trade, which is located entirely in Baltimore, at which place is prepared over nine-tenths of the world's product of steam-canned oysters. Occasionally small steaming-houses have been operated at other ports in Maryland, but their product has never been extensive, and during the last four or five years Baltimore has had the exclusive enjoyment of this branch of the trade in Maryland. The marketing of shell or barrel stock oysters is comparatively small in Maryland, and usually no established wholesale houses devote themselves exclusively to this branch of the business. This trade is centered at no particular port, being distributed along the routes of the various railroad and vessel lines.

One of the most fruitful sources of trouble in connection with the oyster marketing trade, is the system of measuring

the oysters as they are delivered at the markets. The shucking trade is extensive, but conducted on a small profit by reason of the great competition, and during some seasons a slight variation in the size of the bushel measure used may determine whether a firm may gain or lose by the season's work. •

As early as 1860, regulations were made to prevent frauds in the measurement, but these were frequently amended or changed, and about the only heritage the industry now has from those enacted prior to 1884, are the regulations for the bushel measure and the provision for licensed measurers. The bushel measure is now required to be an iron tub of the following dimensions: Inside diameter at bottom, $16\frac{1}{2}$ inches; inside diameter at top, eighteen and twenty-one inches diagonal from the inside chime to the top, the same to be even or struck measure. The licensed measurers, each of whom pays \$10 annually as license fee, are required to measure all oysters sold in the various ports, receiving for their services the sum of one-half cent per bushel, to be paid equally by buyer and seller. Each dealer may designate such measurer as he desires, as the number authorized is unlimited, and he usually has some one in his employ to obtain license and attend to the work, thus saving the measuring fee.

In 1884 (ch. 299) the Governor was required thereafter, at each session of the General Assembly, to appoint five persons for Baltimore and one person for each of the other oyster ports in the State, who should be known as general measurers of oysters, and whose duty it should be to see that the licensed measurers properly attend to their duty, and that all laws in respect to oyster measuring should be complied with, receiving as compensation five cents on each 100 bushels of oysters received, the same to be paid by the seller. This fee was changed, in 1886, to ten cents per 100 bushels.

The Baltimore Markets.

Baltimore is the principal oyster market of the world. Each year there is handled in that city a quantity about equal to the

annual oyster product of all the countries of Europe and one-fifth as many as are handled in all the rest of the world combined. The following table exhibits for a period of years the quantity received during each season:

Table showing oyster receipts at Baltimore.

SEASON.	No. of bushels.	Authority.
1849—1850.....	1,350,000	.....
1856—1857.....	2 610,000	.....
1865—1866.....	3,860,000	C. S. Maltby.
1869—1870.....	5,000,000	Hunter Davidson.
1879—1880.....	6,459,292	R. H. Edmonds.
1884—1885.....	6,273,118	General measurers.
1885—1886.....	6,909,963	Do.
1886—1887.....	6,115,275	Do.
1887—1888.....	5,695,304	Do.
1888—1889.....	5,589,360	Do.
1889—1890.....	5,925,400	Do.
1890—1891.....	4,393,605	Do.
1891—1892.....	5,354,320	Do.
1892—1893.....	4,765,270	Do.

In comparing the receipts as noted in the foregoing statement, it is proper, because of the effects of the cull law, to add about eight per cent. to the receipts for 1890-91, and eleven per cent. to those for 1891-92 and 1892-93.

In addition to the foregoing, there have been landed in Baltimore during each season by the bay steamers, about 50,000 barrels of oysters consigned direct to the retail dealers and consumers. Neither do the above figures include several thousand bushels of high-grade oysters purchased annually from northern planters.

Of the oysters landed at Baltimore in 1890-91, about one-fifth were received from Virginia waters and from Virginia vessels oystering in the Potomac river. The quantity from this source during that season was exceptionally large; generally it is not more than one-seventh or one-eighth of the total receipts. During the last three or four seasons about 25,000

bushels have annually come from North Carolina. Those are about the cheapest oysters transported to Baltimore, selling for thirty to thirty-five cents per bushel. In addition to the seasonal variations, the quantity of oysters landed in Baltimore varies much from month to month, and even from week to week, according to the weather, the most favorable being clear and sufficiently cold to prevent catching oysters in more northerly States, but not so cold as to prevent working in the Chesapeake.

During the last eight years the largest quantity received at Baltimore during any one week was 408,940 bushels, which arrived during the week ending November 17th, 1888. The smallest quantity during the busy part of the season for the same period was 20,110 bushels, in the week ending January 21st, 1893. The receipts from the 19th to the 25th week were very much less in 1892-93 than for the same period of time for many years, this being due to the exceptionally cold weather restricting the catch, thousands of boats and vessels being "frozen up." Had the receipts during those weeks been equal to those of the corresponding period in the previous season, the quantity landed at this port during 1892-93 would have exceeded that of 1891-92 by over 1,000,000 bushels.

Practically, all the oysters delivered at Baltimore in bulk are handled by men known as commission sellers, who control the sales of nearly all the oyster vessels arriving in that port, and most of whom have been oystermen at some time in their careers. They attend to the financial dealings of the captains in the city, the bargaining and sale of the oysters, and advance money to the oystermen when desired. For their services, they charge one and a-half cents per bushel, but prior to the season of 1891-92 they received one cent per bushel of oysters handled. They usually work in companies of two or three men each, the number of companies being fifteen, consisting of thirty-four men, and using property valued at \$65,000, with a cash or credit capital approximating \$260,000. By these men the oysters are sold to the various branches of the trade.

The following table exhibits for each week during the last three seasons the receipts of oysters in Baltimore, except the small quantity of barrel stock landed by steamers:

Table showing weekly receipts of oysters at Baltimore during certain seasons.

MONTH.	Week of season.	1890-91.	1891-92.	1892-93.
September. . . .	First.....	35,740	18,150	12,620
	Second.....	34,750	25,680	26,470
	Third.....	51,280	27,080	45,010
	Fourth.....	76,760	32,320	54,910
October.....	Fifth.....	70,130	43,720	114,970
	Sixth.....	123,140	80,830	171,500
	Seventh.....	151,170	129,980	230,870
	Eighth.....	132,170	202,050	326,290
November.	Ninth.....	227,820	240,270	300,050
	Tenth.....	145,490	279,010	190,210
	Eleventh.....	192,710	324,020	269,020
	Twelfth.....	147,100	309,090	202,560
December.....	Thirteenth.....	204,000	241,650	190,290
	Fourteenth.....	226,390	283,590	286,580
	Fifteenth.....	174,200	271,350	230,350
	Sixteenth.....	174,210	295,610	242,780
January.....	Seventeenth.....	182,050	209,200	127,690
	Eighteenth.....	137,940	212,080	146,500
	Nineteenth.....	122,150	198,940	96,220
	Twentieth.....	85,820	120,110	40,620
February.....	Twenty-first.....	106,410	140,370	20,110
	Twenty-second ..	174,090	120,090	36,790
	Twenty-third....	156,250	125,610	39,540
	Twenty-fourth...	137,980	204,050	100,230
March.....	Twenty-fifth....	124,220	165,910	100,600
	Twenty-sixth....	118,430	127,190	125,220
	Twenty-seventh .	70,470	111,110	205,160
	Twenty-eighth...	72,450	154,480	186,810
April.....	Twenty-ninth...	108,260	107,350	187,500
	Thirtieth.....	100,280	108,130	176,290
	Thirty-first.....	149,620	171,090	149,530
	Thirty-second ..	93,060	154,530	71,480
May....	Thirty-third.....	99,960	77,580	56,150
	Thirty-fourth....	77,150	39,200	4,350
	Thirty-fifth.....	9,620	3,300	.....
Total.....		4,393,600	5,354,320	4,765,270

During the early prosecution of the oyster industry, such oysters as were landed at Baltimore and not needed or intended for local consumption were sent by wagons and cars to the

neighboring towns, in the shell. The first wholesale shucking-house was opened here about 1830, but met with indifferent success and soon abandoned the business. At that time the oyster trade of the country centered about New York city and Fair Haven, Conn., particularly the latter place, at which were marketed native Connecticut oysters, as well as the stock obtained by vessels from the Chesapeake. The continued decrease in the native supply in that State, and the consequent increase in cost, indicated that the trade could be more profitably carried on in Baltimore than in Fair Haven, and induced Mr. C. S. Maltby, of the latter place, to move to Baltimore in 1836 and establish a shucking-house on the plan of those operating in his native town. His trade increased rapidly and, the success being noted, other persons engaged in the business, and within a few years regular lines of oyster wagons were operated, running from Baltimore to the neighboring cities. Those oysters intended for shipment to distant points were shucked and sealed in tin cans or very small wooden kegs, and with care could be preserved for a few weeks, this depending on their temperature. The general use of these small packages, however, was long ago discontinued, and the shipment is now almost entirely in large tubs or kegs holding several gallons.

At present the number of Baltimore houses engaged in shucking oysters for the raw trade is fifty-eight, with property valued at \$1,330,000; ten of these houses, worth \$615,000, engage also in handling steamed oysters. One or two of them, with the wharf property attached, are worth \$175,000, and are capable of handling 7,000 bushels of oysters in a day. The number of persons employed in the raw trade is about 3,650, of whom about 3,200 are engaged in shucking. The latter are mostly men, but in some of the establishments large numbers of women find employment. The work is fatiguing and requires strength, as well as skill. The men are usually able to shuck more than the women; and while an able male shucker, working twelve hours, can make \$2.25 per day, yet, because of the irregular employment, the shuckers do not average more

than \$1.25 throughout the season. The price paid for this labor is twenty cents per "gallon cup," this, as provided by the statutes, (L. 1886, ch. 537,) holding nine pints wine measure. The other employes in the raw-shucking trade, numbering about 450 men, are on weekly wages, ranging from \$6 to \$20 per week, and amounting to about \$115,000 during an average season.

It is reported that in 1846-47 there were six houses in this trade, utilizing about 250,000 bushels annually. In 1865-66 the oysters utilized in the raw-shucking trade amounted to 1,875,000 bushels. From that time until 1874 the trade rapidly increased in extent, but since the last-named date, on account of the increasing competition with other markets along the bay shores, little variation has existed in the quantity of oysters handled by this branch of the trade at Baltimore. The following exhibits the quantity utilized in the raw-shucking trade of that city during a number of seasons:

Baltimore raw-shucking trade receipts.

SEASON.	No. of bushels.	SEASON.	No. of bushels.
1846-47.....	250,000	1887-88	2,893,755
1865-66.....	1,875,000	1888-89	2,809,120
1879-80.....	3,769,353	1889-90	3,206,177
1884-85.....	3,255,095	1890-91	2,331,228
1885-86.....	3,549,873	1891-92	2,736,342
1886-87	2,975,385	1892-93	2,698,126

In addition to labor items, large expenditures are made for ice, tubs, etc., making the total cost of handling the oysters in the shucking-houses about twenty-five cents per bushel. The total value of the output of the raw-shucking houses of Baltimore during each of the last four seasons has been \$2,662,076, \$2,373,526, \$2,482,000, and \$2,625,000, or an average for each bushel of oysters received, of \$0.83, \$1.02, \$0.90, and \$0.97, respectively.

The Steaming Trade.

The preserving of prepared foods in hermetically sealed tin cans was begun in this country about 1844, salmon and lobsters being among the first products so prepared. About 1848 a modification of the process employed was extended to the preserving of oysters, they being first cooked in kettles. This is said to have been originated by Mr. Thomas Kensett, of Baltimore, but the trade was developed by Messrs. A. Field & Co., of that city. About 1860 Mr. Lewis McMurray began scalding the oysters, and the product of his house enjoyed a high reputation.

The present method of steaming began about 1864, the procedure then adopted differing from the present in that the oysters were placed in baskets holding about three pecks each, and these to the number of about 200, were placed in a large box and there steamed. From the beginning of this trade up to the present time it has been prosecuted almost entirely at Baltimore, probably not five per cent. of the total quantity of oysters steam-canned in America since 1848 having been prepared in houses outside of that city. From 1860 up to 1875 the steaming business was prosperous, but from 1875 to 1880 reputable firms engaged in this branch of the oyster industry suffered considerably from the operations of certain unscrupulous packers, who by putting up "light weights" injured the reputation of the Baltimore product. Mutual co-operation among the packers resulted in a decrease in the fraudulent practice, but it was not entirely broken up until 1884, when the General Assembly required (L. 1884, ch. 257) that all persons engaged in steaming oysters should cause to be stamped on each can the true weight of the solid oysters therein, all sales of unstamped oysters to be void. Provision was made for the appointment by the Governor of two persons as examiners of the oysters packed, who should see that the law relative to "light weights" was properly enforced. Each person or company engaging in the canning of steamed oysters, as a condition on which they were permitted to carry on the business, was required, at the end of each month, to make a

sworn statement to the comptroller of the State treasury of the quantity of oysters steamed, at the same time paying into the State treasury one-tenth of one cent per bushel for all so used.

The following statement is presented, exhibiting for a period of years the quantity of oysters utilized in the steaming trade at Baltimore:

Baltimore steaming trade receipts.

SEASON.	No. of bushels.	SEASON.	No. of bushels.
1865-66.....	965,000	1888-89.....	2,570,217
1879-80.....	2,689,939	1889-90.....	2,491,088
1884-85.....	2,745,923	1890-91.....	1,860,792
1885-86.....	3,074,770	1891-92.....	2,396,763
1886-87.....	2,909,761	1892-93.....	1,826,428
1887-88.....	2,591,402		

The following table exhibits by months the quantity of oysters steam-canned at Baltimore during certain seasons:

MONTHS.	1884-85.	1885-86.	1889-90.	1890-91.	1891-92.	1892-93.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
September....	61,623	67,281	20,524	6,244	10,677	
October.....	268,180	564,023	354,241	207,436	396,257	490,608
November....	474,826	769,265	549,817	396,728	586,370	348,395
December....	485,062	516,052	299,218	307,183	459,460	178,830
January.....	255,424	129,004	141,459	165,312	83,005	14,042
February....	274,921	247,289	301,352	308,709	290,980	39,134
March.....	543,523	575,364	385,996	157,329	269,372	346,910
April.....	382,364	206,492	457,820	295,203	311,075	397,832
May.....			1,185	2,368		
Total....	2,745,993	3,074,770	2,491,088	1,860,792	2,396,763	1,826,428

The number of houses in Baltimore engaged in steaming oysters is twenty, valued at \$1,255,000; of these, ten valued at \$630,000 engage in handling raw oysters as well as steamed. These houses are all located along the shores of the harbor,

and, together with the ground occupied, range in value from \$6,000 to \$185,000. The quantity of oysters handled by each house varies from a few hundred bushels to 650,000. The smallest quantity handled by any one house in 1889-90 was 631 bushels; in 1890-91, 3,866 bushels; in 1891-92, 7,918 bushels; and in 1892-93, 2,014 bushels. The largest quantity handled by any one house during the same seasons was 551,771, 560,815, 557,984, and 505,100, respectively. On several occasions a single house has steamed over 170,000 bushels in one month.

The following is a description of the methods of handling the oysters in the steaming-houses:

The oysters are taken from the vessels and placed in cars of iron frame-work, six or eight feet long. These cars run on a light iron track, which is laid from the wharf through the "steam chest" or "steam box," to the shucking shed. As soon as a car is filled with oysters (in the shell) it is run into the steam chest, a rectangular oak box, fifteen to twenty feet long, lined with sheet iron, and fitted with appliances for turning on steam; the doors, which work vertically and shut closely, are let down, the steam admitted, and the oysters left for ten or fifteen minutes. The chest is then opened and the car run into the shucking room, its place in the chest being immediately occupied by another car. In the shucking sheds the cars are surrounded by the shuckers, each provided with a knife and a can arranged so as to hook to the upper bar of the iron frame-work of the car. The steaming having caused the oyster shells to open more or less widely, there is no difficulty in getting out the meats, and the cars are very rapidly emptied. The oysters are then washed in ice water and transferred to the "fillers' table." The cans are filled, packed in a cylindrical iron crate or basket and lowered into a large cylindrical kettle, called the "process kettle," or "tub," where they are again steamed; after this they are placed, crate and all, in the "cooling tub," and when sufficiently cool to be handled the cans are taken to the soldering table and there "capped"—that is, hermetically closed. From the "cappers" they are transported to another department, labeled, and packed in boxes for shipment. The whole steaming process will not occupy more than an hour from the time the oysters leave the vessel until they are ready for shipment.

The shuckers usually work in gangs of six or eight persons, comprising sometimes whole families of men, women, and children. They number about 4,000, ranging in ages from twelve to sixty years, and are mostly women and children, the work being light and peculiarly adapted to them. They are mainly of foreign parentage, Germans and Austrians predominating. Few scenes are more interesting than those observed on a visit to the shucking room of any one of the large canning houses. At one end the cars of steaming-hot oysters are received; and as these are arranged in long rows covering the length of the room, the shuckers, to the number of 600 or more in some houses, dressed in their peculiar ways, surround the cars, and with rapidly working knives and skill born of long experience, they hastily remove the yet-steaming oysters. While the air is full of the hubbub of foreign tongues, as each shucker discusses with her neighbor the petty ambitions or jealousies entertained, or relates the latest bit of domestic gossip, nothing is allowed even for a moment to stop the rapid working of their knives. Sometimes during the busy season, even before daylight, these employes may be seen surrounding the doors of the canning-houses, waiting for the day's work to commence. They are extremely industrious, and hundreds of small dwelling-houses have been purchased in Baltimore by the money obtained by the women and children at work in the oyster-houses.

The shucking is done into a tin cup, known legally as the "oyster gallon cup," which holds nine pints wine measure. The shuckers are paid at the rate of six cents per "cup," averaging about sixty-five cents per day, the total wages paid them amounting to about \$80,000 annually.

About 600 other persons are employed about the canning-houses, of whom about three-fifths are men. These employes are paid from \$5 to \$25 per week, the total wages amounting to about \$90,000 annually. The largest item of expense in the canning-houses outside of the cost of the oysters, is the purchase of tin, lables, etc., this amounting to about \$315,000 annually. The incidental expenses amount to about \$25,000

annually. These items make the total cost of handling a bushel of oysters in the canning-houses about twenty-nine cents, which is about four cents per bushel more than the expense of handling them in the raw-shucking establishments.

The cost of the oysters for the canning trade has averaged during each of the last four seasons, forty-three, fifty-five, forty-eight, and fifty-four cents, respectively. Each bushel produces about fifty ounces of "solid meats." These are packed in one-pound and two-pound cans, and cans of miscellaneous sizes, most of the latter being a trifle larger than the one-pound cans, which contain about five ounces of solid meats, the two-pound cans containing ten ounces. The price received during the last four or five years for the one-pound and two-pound cans has averaged about eighty-five cents and \$1.60, respectively, per dozen. The value of the output of the canning trade during each of the last four seasons has been \$1,728,985, \$1,612,572, \$1,856,510, and \$1,505,940, an average for each bushel of oysters handled of about sixty-nine, eighty-six, seventy-seven, and eighty-four cents, respectively. During the summer these houses and employes are also engaged in canning fruits and vegetables.

Through the valuable assistance of many persons connected with the oyster trade of Baltimore, I am enabled to exhibit, with much detail, the extent of the trade in that city during recent seasons, these data being presented in the following tables:

Statistics of Baltimore oyster trade.

ITEMS.	1889-90.	1890-91.	1891-92.
No. of establishments:			
Raw trade only.....	51	49	48
Raw and steaming trade combined.....	9	9	10
Steaming trade only.....	10	10	10
Commission sellers.....	14	15	15
Total.....	84	83	83

Statistics of Baltimore oyster trade—Continued.

ITEMS.	1889-90.	1890-91.	1891-92.
Property invested, value :			
Raw trade only	\$734,600	\$715 500	\$715,000
Raw and steaming trade combined ..	610,000	595,000	615,000
Steaming trade only.....	645,000	639,000	640,000
Commission sellers.....	55,000	63,600	65,000
Total.....	\$2,044,600	\$2,013,100	\$2,035,000
Cash or credit capital :			
Raw trade.....	\$650,000	\$570,000	\$620,000
Steaming trade.....	1,045,000	930,000	1,070,000
Commission sellers.....	240,000	255,000	260,000
Total.....	\$1,935,000	\$1,755,000	\$1,950,000
Persons engaged (proprietors and clerks) :			
Raw trade only.....	139	130	132
Raw and steaming trade combined.....	42	42	44
Steaming trade only.....	46	46	47
Commission sellers.....	40	43	43
Total.....	267	261	266
Shuckers :			
Raw trade.....	3,284	3,014	3,194
Steaming trade.....	4,256	3,763	4,203
Total.....	7,540	6,777	7,397
Other employes :			
Raw trade.....	320	278	306
Steaming trade.....	560	514	554
Total.....	880	792	860
Grand total of persons.....	8,687	7,830	8,523
Trade of commission sellers :			
Oysters received from transporters, bushels.....	5,925,400	4,393,600	5,354,320
Value received by transporters..	\$3,084,075	\$2,967,051	\$3,108,390
Value received by commission sellers	\$3,143,329	\$3,010,987	\$3,188,650
Raw shucking trade :			
Oysters received, bushels	3,206,177	2,331,228	2,736,342

Statistics of Baltimore oyster trade—Continued.

ITEMS.	1889-90.	1890-91.	1891-92.
Expenses :			
Cost of oysters.....	\$1,899,660	\$1,806,129	\$1,810,120
Wages paid shuckers.....	425,909	302,164	366,430
Wages paid others.....	128,247	89,752	109,365
Incidental expenses.....	67,330	45,760	60,000
Total.....	\$2,521,146	\$2,243,805	\$2,345,915
Products :			
Extra selects—			
Gallons.....	83,361	48,475	52,120
Value.....	\$134,062	\$82,184	\$75,180
Selects—			
Gallons.....	589,724	452,266	520,610
Value.....	\$768,260	\$682,287	\$724,050
Standards—			
Gallons.....	1,947,636	1,362,640	1,654,350
Value.....	\$1,759,754	\$1,608,055	\$1,682,770
Total gallons.....	2,620,721	1,863,381	2,227,080
Total value.....	\$2,662,076	\$2,373,526	\$2,482,000
Steaming trade :			
Oysters received, bushels.....	2,491,088	1,860,792	2,396,763
Expenses :			
Cost of oysters.....	\$1,071,168	\$1,023,436	\$1,201,600
Wages paid shuckers.....	74,320	61,074	73,680
Wages paid others.....	98,765	74,160	97,500
Cost of tin cans, labels, etc....	319,022	310,370	320,000
Incidental expenses.....	24,950	18,900	25,000
Total.....	\$1,588,225	\$1,487,940	\$1,717,780
Products :			
Five-ounce cans, prepared—			
Number.....	9,569,160	7,890,632	9,388,650
Value.....	\$723,027	\$632,741	\$764,450
Ten-ounce cans, prepared—			
Number.....	4,579,356	3,995,521	4,643,822
Value.....	\$632,138	\$621,146	\$725,515
Miscellaneous cans, prepared—			
Ounces.....	23,361,850	19,720,840	22,635,000
Value.....	\$373,820	\$358,685	\$266,545
Total ounces.....	117,001,210	99,129,210	116,016,470
Total value.....	\$1,728,985	\$1,612,572	\$1,856,510

The County Markets.

The shucking-houses situated at the smaller ports along the bay shores have greatly increased, both in number and capacity, during the last ten years. These are usually well-built structures, and while none equal the size of the large houses in Baltimore, yet they compare well with the general run of them. They are devoted entirely to the handling of raw oysters and the business conducted by them is similar to that of Baltimore, but, being nearer the reefs, they are able to purchase more cheaply and frequently handle a lower grade of oysters than is utilized by the large houses in that city. All have been established since 1860, and most of them have been prominent markets only during the last fifteen years. The following notes are in reference to the most important of these markets:

Amsterdam, built on herring bones, has its American counterpart in Crisfield, built on oyster shells. The center and business portion of the town is now situated where in the beginning of the oyster industry of Somerset county, and even as late as 1868, vessels were accustomed to dredge for oysters or to lie in harbor. And not only does the town itself, but its business and prosperity, rest upon the product of the oyster reefs. This port is situated in one of the most productive oyster regions of the Chesapeake, and vast quantities of these mollusks are caught within sight of the shucking-houses. Somerset has more persons engaged in catching and transporting fishery products than any other county in America, over one-half of the wage-earners thereof being engaged in the various branches of the fisheries.

The shucking trade was established at Crisfield in 1870, in competition with that of Salisbury and Seaford (Delaware), and within ten years it had grown to 700,000 bushels a year. It gradually extended beyond the limits of the town, and many shucking-houses are now situated at various points in the neighborhood convenient to the Crisfield branch of the New York, Philadelphia and Norfolk Railroad. The oysters

handled are nearly all the product of Tangier and Pocomoke sounds, a quantity coming from those portions of these sounds situated within the State of Virginia. In this locality are found twenty-eight houses, valued at \$125,000, and employing 1,500 persons. The latter are mostly colored, only a few white persons being employed, except in positions of responsibility. The wages paid are about the same grade as in Baltimore, and approximate \$175,000 annually.

Cambridge is the most extensive oyster market in Dorchester county. The importance of this port as an oyster center is of more recent development than that of Crisfield. The trade began here about 1871, but its greatest development has occurred during the last ten years. Including the one or two small markets in other portions of the county, the trade now numbers nineteen shucking-houses, valued at \$50,000, and gives employment to 750 persons, disbursing about \$90,000 in wages annually. Most of the oysters handled are obtained from the Choptank river. The annual product of the shucking-houses represents about 600,000 bushels, the cost of handling which is about twenty-five cents per bushel.

Talbot has three wholesale oyster ports, Oxford, St. Michael's, and Claiborne. Oxford is located on the Choptank river across from and competing with Cambridge. St. Michael's and Claiborne are situated on the shores of Eastern bay. The shucking trade at the latter port is of recent origin and comparatively light, but the industry at St. Michael's and Oxford dates back to about 1865. Little difference exists in the trade conducted at these two ports, either in the methods or quantity of oysters handled. There are at present in Talbot county fifteen shucking-houses, valued at \$50,000, and employing 700 persons, who receive nearly \$100,000 in wages annually. The quantity of oysters handled by these houses approximates 650,000 bushels annually and consists mostly of "Choptanks" and "Eastern Bays."

Excepting Baltimore, Annapolis is the only wholesale oyster market on the Western Shore of Maryland. The business was

established here about 1866 and, together with the oyster fishery, it at present constitutes the most important commercial source of revenue in the "Ancient City." Nearly all of the oysters handled are the product of the tonging-grounds along the shores of Anne Arundel county, with occasional cargoes from Eastern bay and Chester river. The quantity received at this market annually amounts to about 300,000 bushels, and the persons employed in the ten houses, which are valued at \$35,000, number 400, who receive \$40,000 a year in wages, the total cost of handling the oysters amounting to about \$75,000.

Other Ports.

Several small markets exist in Wicomico and Queen Anne's counties, giving employment to about 125 persons, and utilizing about 110,000 bushels of oysters annually. The shucking-houses in Wicomico county are located at Whitehaven, on the Wicomico river. Salisbury, in that county, formerly handled a large quantity of oysters, and was the first wholesale market established in Maryland outside of Baltimore, but the more favorable location of Crisfield attracted the trade of Salisbury as soon as the former port obtained railroad facilities.

The oyster trade at Seaford, Delaware, located on a branch of the Nanticoke river, is entirely dependent on the product of the fishery in Maryland, nearly all of its supply being obtained from the Tangier sound and tributaries. This was the first of the down-the-bay oyster markets, the industry being started here in 1859 by Messrs. Platt and Mallory, from Connecticut. From 1860 to 1868 a very large business was done here in canning raw oysters. At present there are five shucking houses at Seaford, valued at \$19,000, employing 415 persons, and handling about 250,000 bushels of oysters annually.

The following tables exhibit with much detail the extent of the shucking trade at the county markets during certain seasons:

The County oyster markets.

COUNTIES.	Number of firms.	Number of persons en- gaged.	Value of property.	Cash or credit capital.	Wages paid.	Oysters received.		Oysters sold.		Enhancement in value.	Average cost per bushel.	Average value received per bushel.	Average enhancement in value per bushel.
						Bushels.	Value paid.	Gallons.	Value received.				
1880-90.													
Somerset.....	27	1,436	\$115,750	\$112,950	\$165,886	1,140,753	\$ 513,138	771,558	\$ 780,376	\$267,238	\$0.45	\$0.68	\$0.23
Wimico.....	1	63	3,300	5,000	4,925	46,500	20,925	31,500	33,560	12,035	.45	.72	.27
Dorchester.....	18	789	49,430	76,500	94,440	674,200	303,390	451,254	456,558	153,168	.45	.68	.23
Talbot.....	14	716	47,975	37,200	102,976	709,970	333,925	484,595	505,976	172,051	.47	.71	.24
Queen Anne's.	2	37	1,750	1,300	5,310	35,000	14,500	23,700	23,751	9,251	.41	.67	.26
Anne Arundel.	10	403	34,500	40,000	56,500	387,941	139,680	271,620	231,860	92,180	.36	.60	.24
Total.....	72	3,444	\$252,705	\$272,950	\$430,037	2,994,364	\$1,325,558	2,034,227	\$2,032,081	\$706,523	.44	.67	.24
1890-91.													
Somerset.....	28	1,545	119,075	123,250	181,675	1,259,040	570,969	848,206	831,034	263,065	.46	.66	.20
Wimico.....	2	123	8,800	11,500	11,633	110,500	55,250	71,950	77,680	22,430	.50	.70	.20
Dorchester.....	19	745	50,850	75,100	83,910	583,783	294,526	398,935	407,954	113,428	.50	.70	.20
Talbot.....	13	632	49,450	35,200	80,735	562,446	277,297	382,170	386,892	109,595	.49	.69	.20
Queen Anne's.	2	32	1,750	1,300	5,050	33,000	16,500	22,400	22,530	6,030	.50	.69	.19
Anne Arundel.	9	386	23,000	39,500	34,800	261,523	136,240	201,064	187,910	51,670	.50	.70	.20
Total.....	73	3,463	\$262,925	\$285,850	\$397,803	2,810,292	\$1,350,782	1,927,725	\$1,917,000	\$566,218	.48	.69	.20

The following tabular statement exhibits in a comparative form the total extent of the shucking trade during a number of seasons. The increase in the county markets at the expense of the trade at Baltimore is particularly noticeable:

Table showing total extent of the oyster shucking trade in Maryland.

ITEMS.	1879—1880.			1889—1890.		
	Baltimore.	Counties.	Total.	Baltimore.	Counties.	Total.
Number of persons.....	6,627	2,012	8,639	8,687	3,444	12,131
Value of property.....	\$1,360,966	\$75,060	\$1,436,026	\$2,044,600	\$252,705	\$2,297,305
Cash capital.....	\$2,338,300	\$154,050	\$2,492,350	\$1,935,000	\$272,950	\$2,207,950
Wages paid.....	\$602,427	\$175,352	\$777,779	\$727,241	\$430,037	\$1,157,278
Other expenses.....	\$497,541	\$126,190	\$623,731	\$411,302	.....	.....
Oysters shucked:						
Raw, bushel.....	3,769,353	1,160,948	4,930,301	3,206,177	2,994,364	6,200,541
Value paid.....	\$1,448,040	\$300,420	\$1,748,460	\$1,899,660	\$1,325,558	\$3,225,218
Value received.....	\$2,272,240	\$453,497	\$2,725,737	\$2,662,076	\$20,2081	\$4,694,157
Oysters canned:						
Bushels.....	2,689,939	33,252	2,723,191	2,491,088	.....	2,491,088
Value paid.....	\$811,208	\$7,280	\$818,488	\$1,071,168	.....	\$1,071,168
Value received.....	\$1,244,609	\$23,403	\$1,268,112	\$1,728,985	.....	\$1,728,985
Total oysters handled:						
Bushels.....	6,451,292	1,194,200	7,645,492	5,697,265	2,994,364	8,691,629
Value paid.....	\$2,259,248	\$307,600	\$2,566,848	\$2,970,828	\$1,325,558	\$4,296,386
Value received.....	\$3,517,349	\$476,499	\$3,993,848	\$4,391,061	\$2,032,081	\$6,423,142
Enhancement in value.....	\$1,258,101	\$168,899	\$1,427,000	\$1,420,233	\$706,523	\$2,126,756

Table showing total extent of the oyster-shucking trade in Maryland.—Continued.

ITEMS.	1890—1891.			1891—1892.		
	Baltimore.	Counties.	Total.	Baltimore.	Counties.	Total.
Number of persons.....	7,830	3,463	11,293	8,523	3,585	12,108
Value of property.....	\$2,013,100	\$262,525	\$2,275,625	\$2,035,000	\$270,500	\$2,305,500
Cash capital.....	\$1,755,000	\$285,850	\$2,040,850	\$1,950,000	\$295,000	\$2,245,000
Wages paid.....	\$527,150	\$397,803	\$924,953	\$646,975	\$456,350	\$1,103,325
Other expenses.....	\$375,030	.....	.....	\$405,000	.....	.....
Oysters shucked:						
Raw bushels.....	2,331,228	2,810,292	5,141,520	2,736,342	3,362,480	6,098,822
Value paid.....	\$1,806,129	\$1,350,782	\$3,156,911	\$1,810,120	\$1,544,610	\$3,354,730
Value received.....	\$2,373,526	\$1,917,000	\$4,290,526	\$2,482,000	\$2,368,130	\$4,850,130
Oysters canned:						
Bushels.....	1,800,792	.....	1,860,792	2,396,763	.....	2,396,763
Value paid.....	\$1,023,436	.....	\$1,023,436	\$1,201,600	.....	\$1,201,600
Value received.....	\$1,612,572	.....	\$1,612,572	\$1,856,510	.....	\$1,856,510
Total oysters handled:						
Bushels.....	4,192,020	2,810,292	7,002,312	5,133,105	3,362,480	8,495,585
Value paid.....	\$2,829,565	\$1,350,782	\$4,180,347	\$3,011,720	\$1,544,610	\$4,556,330
Value received.....	\$3,986,101	\$1,917,600	\$5,903,701	\$4,338,000	\$2,368,130	\$6,706,130
Enhancement in value ..	\$1,156,536	\$566,218	\$1,722,754	\$1,326,280	\$823,520	\$2,149,800

The Oyster Shells.

The disposition of the shells has always been an important item for consideration, in connection with the marketing of oysters. As several hundred vessels are constantly employed, during seven months of each year, in transporting oysters to the markets, and as 1,000 bushels of oysters produce about 1,100 bushels of shells, it can be imagined how rapidly these accumulate about the shucking-houses. The quantity of shells landed on the Maryland shores, during the last ninety years, approximates nearly 400,000,000 bushels, or 12,000,000 tons, twice sufficient to overload and sink every sail and steam vessel and barge and canal boat in America, and greater than the combined tonnage of all the sail vessels of the world. Considering that three-fourths of the composition of the shell is carbonate of lime, the question that the Fool asked of King Lear—how the oyster builds its shell—appears almost unanswerable.

Until the last two or three years the shells were usually given away, without cost to the recipient, and even then it was so difficult to become relieved of them that those marketmen, having very limited areas attached to their shucking-houses, spent thousands of dollars annually in having the shells removed. But the demand for them so greatly increased that they are now a considerable source of profit. It is estimated that in 1889-90 the Baltimore marketmen, in the aggregate, paid \$20,000 to be relieved of the shells; in 1890-91 some paid to have the shells removed, some succeeded in giving them away, while others were enabled to sell, this depending on the storing facilities of the respective marketing houses, and probably the trade came out even. In 1891-92 and 1892-93 nearly all the marketmen sold their shells at prices ranging from one-half to one and a-half cents per bushel, the trade receiving each season about \$25,000 therefrom. A similar condition prevailed at the smaller ports of the State.

The uses to which these shells are applied are numerous and constantly increasing, the principal ones being here enumerated in the order of their extent:

1. For country-road making and filling in hollows, chiefly in Maryland, but during the last three years, the Southern States bordering the coast have used large quantities for this purpose.

2. For conversion into lime for use in coal-gas making and other purposes, in Maryland and adjacent States.

3. In the cultivation of oysters, mostly in Virginia, but also in Connecticut and elsewhere. In 1891-92 and 1892-93 about 750,000 bushels were each year used in this manner. The Chesapeake oyster shells are not so desirable for "cultch" as those of New York and Connecticut, because of their being thicker and flatter.

4. For the beds of railroads. While not so endurable or steady as rock, yet they answer the purpose very well. Examples of their use in this manner may be found along the Baltimore and Eastern Shore Railroad, the New York, Philadelphia and Norfolk Railroad, between Salisbury and King Creek, the Sparrow Point road, all in Maryland, and on the Southern Pacific Railroad, near Morgan City, La.

5. For chicken food. This product is very well known, the shells being merely crushed in small particles. Its popularity is increasing, but the quantity of shells utilized, is small.

6. In the manufacture of certain special grades of iron. The shells are used because of their being so largely composed of carbonate of lime.

Statistical Summary.

Little reliable data exist with which to exhibit the extent of the oyster industry of Maryland prior to 1865. Careful search has been made through such Maryland publications of that time as would be likely to make reference to this subject, and although this search has not been rewarded with gratifying results, the following data have been obtained:

An official report of the State, made in 1840, estimated the quantity of oysters used by the trade, during the previous season, to have been 710,000 bushels, the raw-shucking trade having been established in 1836; and in 1850, one of the daily

papers of the State calculated that the annual consumption by the trade was then about 1,350,000 bushels, the steaming trade being established four years previously.

A writer in the *Baltimore American*, in 1857, stated that the quantity of oysters marketed in the shell during the preceding season, 1856-57, was 950,000 bushels, while the shucking-houses of the State utilized 1,660,000 bushels, a total of 2,610,000 bushels. The *Merchants' Magazine and Commercial Review*, of New York, estimated, in 1859, the Maryland crop for the season, 1858-59, to have been 3,500,000 bushels.

Lient. Paul de Broca, who visited this country in 1862 to study the oyster industry in the interests of the French Government, reported the following as the extent of the Maryland industry in 1861.*

Maryland oyster fishery in 1861.

Bushels of oysters caught.....	3,000,000
Value of same.....	\$1,050,000
Number of vessels and boats employed.....	500
Number of persons	3,000
Capital invested.....	\$1,800,000
Commercial value of marketed products.....	\$3,000,000

No data exist to verify or dispute any of these statements, and it is supposed that they fairly represent the extent of the industry during the periods for which they were respectively recorded.

Beginning with 1865, the record of the number of tonging, dredging and scraping licenses issued, as exhibited on other pages of this report, is a good index to the growth and prosperity of each branch of the fishery. The data relative to the quantity of oysters obtained since then, are also more voluminous and reliable than for the preceding period.

During the first season in which the general license system was operative, 1865-66, according to Mr. C. S. Maltby, the catch by tongs amounted to 1,216,375 bushels, and by dredges and scrapes, 3,663,125, a total of 4,879,500 bushels.

*Etude sur l' Industrie Huitriere des Etats-Unis. Paris, 1865.

For the seasons 1868-69, 1869-70 and 1870-71, the following statistics have been presented by Mr. Hunter Davidson, who was then in command of the fishery force:

Maryland oyster fishery in 1868-69, 1869-70, and 1870-71.

ITEMS.	1868-69.	1869-70.	1870-71.
Vessels dredging and scraping.			
Number.....	563	642	637
Tonnage	12,660	14,436	14,425
Value.....	\$449,400	\$513,600	\$509,600
Boats tonging:			
Number....	1,907	1,647	1,792
Value.....	\$143,025	\$123,525	\$134,400
Men dredging and scraping.....	3,560	4,060	3,775
Men tonging.....	3,325	3,410	3,807
Catch, dredging and scraping, bush.	6,305,600	7,190,400	6,686,400
Catch, tonging. bush.	1,735,370	2,043,075	2,261,403
Total..... bushels.	8,040,970	9,233,475	8,947,803
Value.	\$2,814,340	\$3,231,716	\$3,031,731

The following data were reported in 1880, by the United States Fish Commission, as representing the extent of the industry in 1879-80:

Maryland oyster fishery in 1879-80.

BRANCHES OF THE INDUSTRY.	No. of boats and vessels.	Value of boats and vessels.	No. of persons employed.
Dredging.....	700	\$1,050,000	5,600
Scraping	550	440,000	2,200
Tonging	1,825	182,500	5,148
Transporting.....	200	300,000	800
Total.....	3,275	\$1,972,500	13,748

Oysters caught, number of bushels, 10,000,000.

Present Extent of the Industry.

The following tables, compiled for this report, exhibit by counties the extent of the various branches of the oyster industry for the seasons 1890-91 and 1891-92:

TONGING, 1890—1891.

COUNTIES.	Number of men.	Vessels tonging.				Boats tonging.		Total vessels and boats.		Value of tongs.	Total catch.	
		No.	Tonnage.	Value.	Value of outfit.	No.	Value.	No.	Value.		Bushels.	Value.
Somerset.....	1,405	.....	.....	.....	.....	923	\$67,105	923	\$67 105	\$ 9,216	1,094,935	522,774
Wiconico.....	850	.....	.....	.....	.....	244	31,925	344	31,925	5,670	333,500	176,621
Dorchester.....	1,443	.....	.....	.....	.....	1,003	60,180	1,003	60,180	7,498	409,660	205,292
Talbot.....	1,237	.....	.....	.....	.....	656	44,090	656	44,090	7,918	402,000	201,000
Queen Anne's	1,112	.....	.....	.....	.....	488	30,086	488	30,086	5,065	367,375	204,374
Kent.....	769	.....	.....	.....	.....	410	19,609	410	19,609	4,305	236,500	141,388
Anne Arundel.....	1,957	55 440.85	\$25,790	\$5,250	.....	595	45,500	650	71,290	12,442	591,505	321,530
Calvert.....	1,077	9 75.92	5,345	750	.....	512	25,016	521	30,361	10,770	264,730	146,677
St. Mary's.....	1,380	1 12.85	750	90	.....	756	43,125	757	43,875	10,410	463,967	267,241
Charles.....	192	.....	.....	.....	.....	155	5,673	155	5,673	1,020	54,518	27,849
Worcester.....	192	3 20.62	1,150	85	.....	112	6,480	115	7,630	795	115,143	93,070
Total.....	11,614	68 550.24	\$33,035	\$6,175	.....	5,954	\$378,789	6,022	\$411,824	\$75,109	4,353,833	\$2,307,816

TONGING, 1891—1892.

COUNTIES.	Number of men.	Vessels tonging.			Boats tonging.		Total vessels and boats.		Value of tongs.	Total catch.	
		Number.	Tonnage.	Value.	Value of outfit.	Number.	Value.	Number.	Value.	Bushels.	Value.
Somerset.....	1,355	.....	.....	.....	.....	890	\$65,220	890	\$65,220	1,065,530	\$486,230
Wicomico.....	830	.....	.....	.....	.....	333	31,025	333	31,025	370,825	175,320
Dorchester.....	1,352	.....	.....	.....	.....	933	59,480	933	59,480	450,500	212,805
Talbot.....	727	.....	.....	.....	.....	512	36,070	512	36,070	324,650	159,180
Queen Anne's.....	1,064	.....	.....	.....	.....	564	37,590	564	37,590	420,160	209,615
Kent.....	862	.....	.....	.....	.....	510	29,480	510	29,480	345,820	174,130
Anne Arundel.....	1,834	41	326.70	\$19,865	\$4,300	574	44,210	615	64,075	667,293	328,975
Calvert.....	1,102	8	70.18	5,200	710	523	28,350	531	33,550	334,640	173,915
St. Mary's.....	1,394	.....	.....	.....	.....	759	43,990	759	43,990	487,675	274,210
Charles.....	167	.....	.....	.....	.....	122	5,105	122	5,105	41,500	21,840
Worcester.....	126	.....	.....	.....	.....	89	5,370	89	5,370	91,520	80,640
Total.....	10,813	49	396.88	\$25,065	\$5,010	5,809	\$385,890	5,858	\$410,955	4,606,385	\$2,296,860

The extent of the bedding or planting industry is here included. This is so small, amounting to about one-seventieth of the extent of the tonging fishery, that this arrangement does not preclude the use of the foregoing figures as an exposition of the extent of the common fishery as prosecuted by means of tongs.

DREDGING, 1890—91.

COUNTIES.	Number of men.	Vessels dredging.			Boats dredging.		Total vessels and boats.		Value of apparatus.	Total catch.	
		Number.	Tonnage.	Value.	Value of outfit.	Number.	Value.	Number.		Bushels.	Value.
Somerset.	2,453	412	7,338.63	\$329,420	\$124,060	13	\$2,610	425	\$332,030	1,823,030	\$913,080
Wimico.	88	13	305.41	14,225	4,815	...	...	13	14,225	42,190	22,085
Dorchester.	203	31	649.10	30,215	10,640	...	...	31	30,215	84,500	43,300
Talbot.	78	18	170.37	8,420	4,220	...	...	18	8,420	46,160	24,235
Kent.	11	2	31.45	1,075	352	...	...	2	1,075	2,800	2,150
Baltimore.	2,015	235	7,591.44	228,645	84,694	...	...	235	228,645	767,046	554,231
Anne Arundel.	40	11	121.16	9,615	1,505	...	...	11	9,615	23,900	16,300
Calvert.	119	19	410.70	22,805	3,035	4	680	23	23,485	56,550	36,300
St. Mary's.	208	18	215.90	12,475	2,400	45	3,820	63	16,295	63,106	34,224
Total.	5,215	759	16,834.16	\$656,895	\$235,721	62	\$7,110	821	\$664,005	2,909,282	\$1,645,905

Of the foregoing 183 vessels (2,648.23 tons) and thirteen boats from Somerset, sixteen vessels (156.31 tons) from Dorchester, and nine vessels (81.24 tons) from Talbot, engaged in scraping within the limits of those counties, catching 465,000, 20,000 and 8,000 bushels, respectively, reducing the catch in "State waters" to 2,416,282 bushels, with a value of \$1,405,905.

DREDGING, 1891—1892.

COUNTIES.	Number of men.	Vessels dredging.			Boats dredging.		Total vessels and boats.		Value of apparatus.	Total catch.	
		Number.	Tonnage.	Value.	Value of outfit.	Number.	Value.	Number.		Bushels.	Value.
Somerset	2,225	351	6,739.37	\$306,145	\$116,750	11	\$2,890	362	\$309,035	1,993,320	\$864,195
Wicomico.....	28	5	94.05	4,975	2,200	.....	.....	5	4,975	19,350	9,080
Dorchester.....	283	42	799.44	37,620	14,680	.....	.....	42	37,620	165,085	70,120
Talbot.....	54	12	121.53	6,100	2,650	.....	.....	12	6,100	44,130	18,885
Kent	14	2	52.04	2,100	380	.....	.....	2	2,100	8,235	4,300
Baltimore, ..	1,964	221	6,992.34	221,670	84,875	.....	.....	221	221,670	1,123,715	621,460
Anne Arundel	114	25	333.42	24,210	5,400	1	450	26	24,660	86,280	38,350
Calvert.....	167	20	228.22	15,850	3,100	20	3,425	40	19,275	109,850	56,100
St. Mary's.....	204	19	257.56	13,440	3,500	39	2,630	58	16,070	102,500	54,120
Charles.....	6	2	42.42	2,600	300	.....	.....	2	2,600	5,600	3,100
Total.....	5,059	699	15,660.39	\$634,710	\$233,835	71	\$9,395	770	\$644,105	3,657,965	\$1,740,310

Of the foregoing, 178 vessels (2,385.60 tons) and eleven boats from Somerset, sixteen vessels (153.70 tons) from Dorchester, and four vessels (36.20 tons) from Talbot county, engaged in scraping within the limits of those counties, catching 500,000, 20,000, and 4,000 bushels, respectively, reducing the catch by dredging in "State waters" to 3,133,965 bushels, with a value at first hands of \$1,502,310.

SCRAPING, 1890—1891.

COUNTIES.	Number of men.	Vessels.				Boats.		Total vessels and boats.		Value of apparatus.	Catch.	
		Number.	Tonnage.	Value.	Value of outfit.	Number.	Value.	Number.	Value.		Bushels.	Value.
Somerset.....	1,416	105	931.30	\$47,185	\$26,225	331	\$78,210	436	\$125,395	\$20,509	1,319,317	\$663,498
Dorchester.....	1,806	268	459.59	129,935	53,447	266	34,580	534	155,515	23,051	1,157,786	577,390
Talbot.....	383	23	2,196.79	10,455	4,090	79	18,160	102	28,615	3,410	204,840	101,257
Total.....	3,605	396	3,587.68	\$187,575	\$33,762	676	\$130,950	1,072	\$309,525	\$46,970	2,681,943	\$1,342,145

In addition to the foregoing, 183 dredging vessels (2,648.23 tons) and thirteen boats from Somerset, sixteen dredging vessels (156.31 tons) from Dorchester, and nine dredging vessels (81.24 tons) from Talbot, engaged in scraping within the limits of those counties, catching therein 465,000, 20,000, and 8,000 bushels, respectively, thus increasing the catch on scraping areas to 3,174,943 bushels, with a value to the oystermen of \$1,582,145.

SCRAPING, 1891—1892.

COUNTIES.	Number of men.	Vessels.				Boats.		Total vessels and boats.		Value of apparatus.	Catch.	
		Number.	Tonnage.	Value.	Value of outfit.	Number.	Value.	Number.	Value.			
Somerset.	1,514	116	1,036.42	\$ 53,015	\$27,960	338	\$ 79,685	454	\$ 132,700	\$21,620	1,472,630	\$ 651,280
Dorchester.	1,952	286	2,692.38	131,420	56,975	280	37,590	566	169,010	25,050	1,565,450	701,060
Talbot	291	18	145.82	8,875	3,640	56	14,520	74	23,395	2,735	180,300	76,610
Total.	3,757	420	3,784.62	\$193,310	\$88,575	674	\$131,795	1,094	\$325,105	\$49,405	3,321,380	\$1,428,950

In addition to the foregoing, 178 vessels (2,355.60 tons) and 11 dredging boats from Somerset, 16 dredging vessels (153.70 tons) from Dorchester, and 4 dredging vessels (36.20 tons) from Talbot, engaged in scraping within the limits of those counties, catching 500,000, 20,000, and 4,000 bushels, respectively, thus increasing the catch on scraping areas to 3,892,380 bushels, with a value of \$1,666,950.

It should be observed that those vessels and boats engaged both in dredging and scraping, are reported only under the former caption in order to avoid a duplication of the property and men employed in the fishery. Many estimates heretofore made on the extent of this industry failing to note this duplication, have thereby reported 235 vessels and boats, 1,000 men, and a catch sometimes amounting to over 1,000,000 bushels more than was actually the case.

TRANSPORTING.

COUNTIES.	1890—1891.					1891—1892.				
	Vessels.				Number of men.	Vessels.				Number of men.
	Number.	Tonnage.	Value.	Value of outfit.		Number.	Tonnage.	Value.	Value of outfit.	
Somerset.....	60	2,005.24	\$91,150	\$13,822	266	78	2,399.48	\$120,360	\$17,100	331
Wicomico.....	10	383.65	19,500	2,495	46	15	564.17	30,260	3,600	63
Dorchester.....	45	1,981.84	98,100	10,735	198	41	1,956.16	92,850	9,650	179
Talbot.....	3	100.94	5,200	590	11	5	138.50	7,350	980	20
Queen Anne's.....	18	344.95	15,150	2,336	48	19	367.84	17,200	2,800	59
Kent.....	40	637.02	20,350	3,873	87	39	620.05	20,100	3,950	85
Baltimore.....	152	5,741.73	219,675	16,899	552	194	7,266.83	269,375	25,828	693
Anne Arundel.....	28	492.32	27,050	2,233	78	22	352.84	22,625	1,840	62
Calvert.....	22	894.07	49,175	3,465	84	21	865.13	47,875	3,400	81
St. Mary's.....	21	529.69	23,650	2,742	74	22	536.29	25,240	3,150	78
Total.....	399	13,111.45	\$569,000	\$59,190	1,444	456	15,067.29	\$653,235	\$72,290	1,651

Condensed tables exhibiting the extent of the various branches of the Fisheries.

1890—1891.

ITEMS.	Persons engaged.	Vessels and boats.		Value of apparatus.	Value of outfit.	Total capital invested.	Products.	
		Number.	Value.				Bushels.	Value.
Tonging.....	11,614	6,022	\$411,824	\$75,109	\$6,175	\$493,108	4,353,833	\$2,307,816
Dredging.....	5,215	821	664,005	70,547	25,721	970,273	2,909,282	1,645,905
Scraping.....	3,605	1,072	309,525	46,970	83,762	440,257	2,681,943	1,342,145
Transporting.....	1,414	399	569,000	.....	59,190	628,190	.....	\$370,000
Total.....	21,878	8,314	\$1,954,354	\$192,626	\$384,848	\$2,531,828	9,945,058	\$5,665,866

* Enhancement in value of oysters transported.

Condensed tables exhibiting the extent of the various branches of the Fisheries.—Continued.

1891—1892.

ITEMS	Persons engaged.	Vessels and boats.		Value of apparatus.	Value of outfit.	Total capital invested.	Products.	
		Number.	Value.				Bushels.	Value.
Tonging.....	10,813	5,858	\$410,955	\$70,800	\$5,010	\$486,765	4,606,385	\$2,296,860
Dredging	5,059	770	644,105	65,430	233,835	943,370	3,657,965	1,740,310
Scraping.....	3,757	1,094	325,105	49,405	88,575	463,085	3,368,380	1,428,950
Transporting.....	1,651	456	653,235	.....	72,290	725,525	.....	*400,000
Total.....	21,280	8,178	\$2,033,400	\$185,635	\$399,710	\$2,618,745	11,632,730	\$5,866,120

NOTE.—Sufficient data are not at hand to exhibit similar tables for 1892-93, but the information from the various oystering centers indicate that the yield during that season was about 10,142,500 bushels, for which the oystermen and transporters received \$5,500,000. Of this amount 4,432,500 bushels were obtained by tongmen, 3,100,000 by dredgers, and 2,610,000 by scrapemen, the total number of men employed approximating 21,200.

* Enhancement in value of oysters transported.

GRAND SUMMARY.

1890-91.	Persons engaged.	Amount of capital employed.
Oystering and transporting.....	21,878	\$2,531,828
Marketing.	11,293	4,316,475
Total.....	33,171	\$6,848,303
1891-92.		
Oystering and transporting.....	21,280	\$2,618,745
Marketing.	12,108	4,650,500
Total..	33,388	\$7,269,245

The total extent to which Maryland is dependent on the oyster fishery is not fully indicated in the foregoing tables. The amount of money received by the oystermen for their product poorly represents the value of this industry. In the eleven counties in which the fishery is prosecuted it is the mainstay of the people, and the prosperity of nearly all business therein is regulated by it. As four-fifths of the oysters are sent out of the State through wholesale markets, etc., and as the value of the product, after it has passed through these markets and transportation agencies, averages about ninety cents for each bushel originally represented, it is reasonable to assume that for each bushel of oysters caught in Maryland about seventy cents is brought into the State. During the last ten years this would amount to about \$80,000,000 received by the oystermen, marketmen, transportation agencies, etc., which would not have been brought into the State were it not for the oyster fishery, and this does not include the value of the millions of bushels of oysters consumed within the State. This sum is much greater than the total taxable value of all property located in the counties in which this fishery is prosecuted, not including the city of Baltimore.

At least ninety-five per cent. of this revenue is received by men whose wages or incomes amount to less than \$1,000 a year. In this class are included all the oystermen and nearly all the employes of the shucking-houses and transportation

agencies. Then when consideration is taken of the large number of persons engaged in other vocations, but dependent on the patronage of these men to a greater or less extent, such as vessel builders and repairers, sail-makers, blacksmiths, house carpenters, grocerymen, merchants, even the physicians, lawyers, etc., the enormous value of the industry is apparent, and it is observed how vitally important to the people of the State is the continued prosperity of the fishery.

A careful survey of the extent of the oyster product of Maryland from the beginning of the present century develops the following as an approximation of the product during each decade, not including those taken by non-residents or those used for fertilizing purposes:

PERIOD.	No. of bushels.	PERIOD.	No. of bushels.
1800-1810.	2,500,000	1860-1870.....	63,000,000
1810-1820.....	4,000,000	1870-1880	114,000,000
1820-1830.....	5,000,000	1880-1890.....	116,000,000
1830-1840.....	8,000,000	1890-1893.....	31,720,000
1840-1850.....	15,000,000		
1850-1860.....	34,000,000	Total.....	393,220,000

To exhibit the comparative value of this product, the following tabular statement is submitted showing the average prices received at Baltimore, during the seasons indicated, for "straight up" or standard stock. These figures are a trifle higher than the average for the product of the State:

SEASON.	Average price per bushel.	SEASON.	Average price per bushel.
	<i>Cents.</i>		<i>Cents.</i>
1850-51.....	30	1880-81.....	40
1855-56.....	30	1885-86.....	45
1860-61.....	35	1889-90.....	53
1865-66.....	*70	1890-91	69
1870-71.....	35	1891-92.....	62
1875-76.....	33	1892-93.....	66

* War prices.

State Revenue and Fishery Force.

Let us now view the oyster industry from another standpoint; and, remembering that the extensive areas of reefs are the properties not of the oystermen but of the State at large, examine Maryland's record as a financier in controlling these properties, omitting consideration, for the time being, of her position as legislator and patron of the industries within her limits.

Comparatively few of the United States have considered it expedient to burden any branch of the fisheries with a special tax; on the contrary the fishermen have at times been the recipients of assistance, in the form of relief from certain general taxes or in the granting of bounties. But there is a growing tendency to consider the taking of oysters different from the ordinary fisheries, and to cause it to bear some special part in paying the expenses of the State, aside from the ordinary taxation of the property engaged in the business.

Maryland was among the first of the States to impose a tax upon the catching of oysters, this being in 1854, when the local scraping license for Somerset county was authorized, followed in 1865 by the adoption of the general license system. Since 1854, and up to the close of the fiscal year 1893, the revenue received from the issuing of oystering licenses by this State has amounted to \$1,781,520.61, not including the revenue from fines imposed for violating the oyster law, as this cannot be considered a tax on the fishery. This is a greater amount than all the remaining States of America have received by special taxation from all branches of their free and private fisheries combined. All of this money has not been paid directly into the treasury of the State, a portion of it being devoted to the purposes of the counties in the waters of which the licenses authorized oystering; nevertheless it is public revenue, collected by authority of the General Assembly and subject to disposition thereby.

The following table exhibits by fiscal years (October 1–September 30) the license fees received from each branch of

the fishery, the rate of fees required during each season having been exhibited on the preceding pages:

Table exhibiting the license revenue during each fiscal year from the various branches of the oyster fishery.

YEARS.	Tonging.	Dredging.	Scraping.	Total.
1854-64.....				
1864-65.....	\$ 1,919.10	\$ 12,111.20		
1865-66.....	8,098.75	48,463.22		
1866-67.....	6,183.44	22,515.29	\$ 51,380.00	\$ 252,582.52
1867-68.....	11,669.20	32,535.90		
1868-69 ..	10,905.56	46,800.86		
1869-70.....	9,409.80	38,675.80	2,830.00	50,915.60
1870-71.....	7,900.00	41,587.46	5,172.00	54,659.46
1871-72.....	8,790.45	39,039.62	5,776.00	53,606.07
1872-73.....	8,969.00	54,159.46	4,954.00	68,082.46
1873-74.....	7,420.50	30,227.77	4,206.00	41,854.27
1874-75.....	7,454.00	42,355.58	4,923.42	54,733.00
1875-76.....	6,797.00	48,468.68	4,418.04	59,683.72
1876-77.	6,382.00	49,837.46	3,625.65	59,845.11
1877-78.....	5,504.00	37,408.39	2,623.20	45,535.59
1878-79.....	6,075.00	31,173.29	3,472.50	40,720.79
1879-80.....	7,025.00	18,606.50	2,689.40	28,320.90
1880-81.....	8,182.35	40,589.98	3,986.14	52,758.47
1881-82.....	8,422.00	52,582.05	4,108.85	65,112.90
1882-83.....	8,752.00	48,841.64	5,241.00	62,834.64
1883-84.....	9,161.00	45,127.65	5,730.62	60,019.27
1884-85.....	15,627.00	69,528.72	6,489.94	91,645.66
1885-86.....	13,083 00	49,631.59	9,752.08	72,466.67
1886-87.....	12,626.00	52,411.68	9,620.64	74,658.42
1887-88.....	13,082.00	48,675.54	8,321.34	70,078.88
1888-89.....	13,812.00	57,928.72	8,374.29	80,115.01
1889-90.....	15,741.00	52,945.27	10,440.43	79,127.70
1890-91.....	24,943.00	50,275.03	15,176.95	90,394.98
1891-92.	22,888 00	44,744.73	13,667.93	81,290.66
1892-93.....	32,353.50	44,781.72	13,333.74	90,468.96
Total.....	\$319,175.65	\$1,252,030.80	\$210,314.16	\$1,781,520.61

From the foregoing table it is observed that during the last five years the revenue from tonging, dredging, and scraping, has been \$109,737.50, \$250,675.47, and \$60,993.34, respectively, or an annual average of \$21,947.50, \$50,135.09, and \$12,198.67. The area of the natural reefs on which these three forms of fishery are prosecuted, has been found to be about 154,121, and eighty square miles, respectively, and the average

annual product during the last five years, 4,850,000, 3,450,000, and 2,750,000 bushels. These data form the basis of the following tabular statement :

FORM OF FISHERY.	Area, square miles.	Product, bushels.	Annual revenue, average for five years.	Average revenue.	
				Per square mile.	Per 1,000 bushels.
Tonging	154	4,850 000	\$21,947 50	\$142 51	\$4 52
Dredging	*121	3,450,000	50,135 09	414 33	14 53
Scraping.....	80	2,750,000	12,198 67	152 48	4 43
Total.....	355	11,050,000	\$84,281 26		
Average				\$237 41	\$7 62

* Of this area, 42 square miles are used also by Virginia oystermen.

The foregoing table exhibits the annual average rate of revenue for the last five years, but as the license fees for tonging were increased in 1892, it does not properly exhibit the extent of the tax which that branch of the fishery is now paying, and the following table is submitted for this purpose, showing the condition of the license-revenue receipts for the season 1892-93:

FORM OF FISHERY.	Area, square miles.	Product, bushels.	Annual revenue.	Average revenue.	
				Per square mile.	Per 1,000 bushels.
Tonging	154	4,432,500	\$32,353 50	\$210 03	\$7 30
Dredging	121	3,100,000	44,781 72	370 14	14 44
Scraping.....	80	2,610,000	13,333 74	166 67	5 10
Total	355	10,142,500	\$90,468 96		
Average				\$254 84	\$8 92

The fact that about 200 vessels and boats work under both a dredging and a scraping license, complicates somewhat the consideration of the proportionate revenue per square mile or per

1,000 bushels for those two forms of fishing. In the two foregoing tables the catch made by these craft has been noted entirely under dredging. Were it practicable to exhibit with greater accuracy these average items for the two branches of fishery indicated, the average revenue from dredging per square mile would be slightly decreased and the revenue per 1,000 bushels would be slightly increased, and an opposite effect would be produced, in these two items, for the scraping branch of the fishery, but the change effected would not be material.

It is thus observed that during the last season the dredgers have paid twice as much revenue or tax per 1,000 bushels as the tongmen, and nearly three times as much as the scrapemen. The total revenue during that season averaged \$8.92 per 1,000 bushels, or \$254.84 per square mile, or forty cents per acre. As the oystermen received about \$5,500,000 for their catch, the State revenue was at the rate of over \$16 per \$1,000 worth of oysters.

The total revenue since the adoption of the license system being \$1,781,520.61, and the area of the reefs approximating 355 square miles, the State has up to the present time received from the reefs, in the form of license fees, an average of \$5,018.36 per square mile, or \$7.84 per acre.

As we can judge of the ability of one financier only by comparing his operations with those of others, let us examine what has been done by other States so far as deriving a revenue from the public oyster reefs is concerned. The following oyster-producing States derive no revenue from this source: Massachusetts, Rhode Island, New York, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Texas, California, Oregon, Washington.

Prior to 1893, Connecticut did not tax her oystermen for working on the public reefs, but in that year adopted a license system on the following basis: For each boat or vessel working on the public reefs the owner thereof is required to pay annually the sum of \$2, if the boat or vessel measures less than

five tons, but if it measures over five tons he is required to pay fifty cents for each additional ton.

In New Jersey the only public-reef oystermen subjected to special taxation are those who gather oysters from the waters of Cumberland county, in Delaware bay. These men are required to obtain a license at the rate of \$5 on all craft not over five tons, and \$1 per ton, custom-house measurement, on all boats and vessels exceeding that tonnage. The total revenue amounts to about \$5,000 annually, while the catch is about 1,300,000 bushels, valued at \$400,000, the area of the natural beds being about 60,000 acres. But this revenue is not so much a tax on the public-reef oystermen as upon the planting operations of that region, for the license also permits, without further cost, the pre-emption of sufficient area of ground in Delaware bay for planting the oysters obtained from the public reefs, this area being about 10,000 acres.

Within the limits of Pennsylvania there are no oyster beds whatever, either public or private. The oysters usually credited to that State are gathered from the beds situated within New Jersey and Delaware, and are obtained in accordance with the regulations of those States.

In Delaware, each tongman, with a few minor exceptions, is required to obtain an annual license, costing \$5. The number of men licensed during each of the last five seasons has been as follows: 1887, 61; 1888, 67; 1889, 68; 1890, 80; 1891, 48; 1892 (September 1, 1892, to March 31, 1893,) 68. The catch amounts to about 120,000 bushels annually, valued at \$32,000. The dredging regulations in Delaware are quite similar to those operative in Cumberland county, New Jersey, the license authorizing the pre-emption of ground for planting purposes in addition to permitting the gathering of oysters from the public reefs. The fee is \$3 per ton, and the revenue amounts to about \$600 annually. The area of reefs on which the dredgemen operate is about 4,500 acres, and the annual catch is about 85,000 bushels, valued at \$20,000.

In Virginia, dredging vessels are required to pay a license fee of fifty cents per ton for each month in which they are engaged,

and each tongman is required to pay annually the sum of \$2 and an additional fee of fifty cents for each boat used. The constitution of the State interdicts the taxing of tongs used on oyster reefs; but conflict with this is avoided by providing, under an elaborate system, for a tax on the quantity of oysters caught and permitting the tongmen to pay an annual fee of \$2 in lieu thereof. From 1880 to 1891, inclusive, the Virginia receipts, from all forms of oyster-license tax in the State, amounted to \$120,153.83; and the disbursements for the oyster police force, etc., were \$163,197.43. The present license system became operative in 1884, and the annual receipts and disbursements since then have been as shown in the following tabular statement:

Virginia oyster fund.

FISCAL YEAR.	Receipt's.	Disbursements.
1884.....	\$ 919 93	\$18,907 97
1885.....	26,476 93	27,025 66
1886.....	22,949 89	22,574 25
1887.....	13,329 21	16,712 35
1888.....	13,755 89	18,922 82
1889.....	12,455 56	17,190 94
1890.....	12,817 53	19,561 73
1891.....	14,114 83	21,683 92
Total.....	\$116,819 77	\$162,579 64

These figures include a small revenue from taxing the private planting-grounds; this, however, is so small that for the purposes of the present discussion they may be considered as representing only the revenue from the public reefs:

In Louisiana, the remaining State which provides for taxing the public-reef oystermen, tonging is the only form of oystering permitted, and the license system regulating it is based on that of Virginia, even to the adoption of the complicated system which the latter State provided in order to avoid conflict with its constitution. The fee in Louisiana is at the rate of fifty cents annually for each boat employed, and an additional

fifty cents every three months for each man engaged. Difficulty, however, has been experienced in collecting the revenue and the regulation is practically inoperative.

An approximation, for the last year for which data are at hand, of the product of the natural or public oyster reefs of each of the United States, and the license receipts therefrom, is contained in the following table:

Product of public oyster-reefs and State revenue therefrom.

STATE.	Public oyster reefs.		Revenue.	Year.
	Bushels.	Value.		
Massachusetts	25,000	\$15,000	.....	1892
Rhode Island.....	16,865	7,858	.....	1892
Connecticut.....	211,090	68 589	.....	1892
New York.....	810,629	485,730	.....	1891
New Jersey.....	1,300,000	400,000	\$5,200	1892
Delaware.....	205,272	51,872	940	1892
Virginia	5,690,700	2,290,850	14,115	1891
North Carolina	807,260	175,567	.....	1890
South Carolina	63,150	23,204	.....	1890
Georgia.....	224,357	40,520	.....	1890
Florida.....	468,431	108,542	.....	1890
Alabama.....	481,070	107,812	.....	1890
Mississippi	806,478	166,672	.....	1890
Louisiana.....	820,000	260,000	.....	1890
Texas.....	440,800	127,990	.....	1890
Washington.....	142,730	127,000	.....	1892
Oregon.....	2,500	3,125	.....	1892
Total.....	12,516,332	\$4,460,331	\$20,255	.....
Maryland	10,142,500	\$5,500,000	\$90,469	1893

Of the Maryland revenue, all of the dredging fees have been paid into the State treasury, and the greater portion of the tonging and scraping fees into the treasuries of the counties wherein the licenses were respectively issued. Prior to 1874-75 all tonging fees, amounting to \$81,266.25, were paid into the State treasury, and the receipts from this branch of the fishery in 1892-93, under the new license system, amounted to \$2,672.70, making a total of \$83,938.95 that has been paid into

the treasury of the State out of the \$319,175.65 revenue from tonging licenses.

Of the revenue from scraping licenses, nothing was paid into the State treasury prior to 1892-93 except the revenue in Dorchester county in 1870-71 and 1871-72, which amounted to \$3,008. In 1892 it was required that ten per cent. of the revenue from scraping licenses, after deducting five per cent. for collection, should be paid into the State treasury. The revenue from the latter source in 1892-93, was \$1,266.63, making a total of \$4,274.63 received into the State treasury out of a total of \$210,314.16 received in fees from this branch of the fishery. These figures form the basis of the following table:

Total revenue received from oyster licenses in Maryland.

Depository.	Tonging.	Dredging.	Scraping.	Total.
State treasury.....	\$83,938 95	\$1,252,030 80	\$4,274 63	\$1,340,244 38
County treasuries..	235,236 70	.....	206,039 53	441,276 23
Total.....	\$319,175 65	\$1,252,030 80	\$210,314 16	\$1,781,520 61

In addition to the foregoing items the State treasury has received one-tenth of one cent for every bushel of oysters used at the steaming-houses, this amounting to \$22,461.20 to the present date; also since 1865, from oyster measurers, fines, and other sources, \$89,807.25; and the counties have collected about \$55,000 from the imposing of oyster fines, etc. This makes a grand total of \$1,948,789.04 collected from all branches of the oyster industry since the establishment of the license system. Of this revenue, \$1,452,512.83 has been paid into the State treasury to the credit of the "oyster fund" and "packers' fund," and \$496,276.23 has been received into the treasuries of the tide water counties.

The revenue paid into the county treasuries has been devoted mostly to public school purposes, a very small portion being

used for enforcing the oyster regulations in certain counties, and in Worcester and Somerset counties in the planting of oyster shells for the extension and improvement of the oyster reefs. In 1892-93 the clerks of the Circuit Courts received \$5,264.18 for issuing the tonging and scraping licenses, but prior to that season they received nothing.

The following table exhibits by fiscal years the receipts and disbursements of the State "oyster fund" since the origin of the general license system :

Fiscal year ending August 31.	Receipts from dredging.	Total receipts.	Disbursements.	Balances.
1865	\$ 12,111 20	\$ 14,030 20	.....	\$ 14,030 20
1866	48,463 22	56,561 97	.....	70,592 17
1867	22,515 29	28,777 65	\$ 80 85	99,289 97
1868	32,535 90	45,326 87	21,321 91	123,294 93
1869	46,800 86	61,301 49	28,186 80	156,409 62
1870	38,675 80	50,098 74	32,381 79	174,126 57
1871	41,587 46	53,136 96	23,675 29	203,588 24
1872	39,039 62	50,782 27	23,076 17	231,294 34
1873	54,159 46	65,490 55	24,770 75	272,014 14
1874	30,227 77	36,278 65	36,882 97	271,409 82
1875	42,355 58	43,560 53	67,484 87	247,485 48
1876	48,468 68	50,764 78	48,368 00	249,882 26
1877	49,837 46	51,078 76	50,136 76	250,824 26
1878	37,408 39	38,426 83	41,683 86	247,567 23
1879	31,173 29	31,969 12	44,379 76	235,156 59
1880	18,606 50	19,411 04	41,784 97	212,782 66
1881	40,589 98	44,925 71	38,403 62	219,304 75
1882	52,582 05	57,751 05	39,070 59	237,985 21
1883	48,841 64	56,075 32	54,114 13	239,946 40
1884	45,127 65	67,650 78	62,704 83	244,892 35
1885	69,528 72	79,704 17	127,089 56	197,506 96
1886	49,631 59	51,057 74	106,600 62	141,964 08
1887	52,411 68	55,561 73	67,221 88	130,303 93
1888	48,675 54	53,236 69	67,913 13	115,627 49
1889	57,928 72	61,562 08	63,306 09	113,883 48
1890	52,945 27	58,178 67	70,955 91	101,106 24
1891	50,275 03	52,260 33	73,645 81	79,720 76
1892	44,744 73	46,652 83	79,665 11	46,708 48
1893	44,781 72	48,437 12	91,302 03	3,847 57
Total.	\$1,252,030 80	\$1,430,051 63	\$1,426,204 06	.....

The "oyster fund" of the State treasury has been used chiefly in equipping and maintaining the fishery force, about

\$1,200,000 having been devoted to that purpose up to the close of the fiscal year 1893. Numerous other items have assisted in diminishing this fund, among which may be mentioned the refunding of transportation license fees collected in 1884 and 1885, amounting to \$27,644.15; the expenditure of \$4,892.35 in an experiment in planting oyster shells; the expenses of the various State commissions or legislative committees appointed to investigate certain features of the industry; painting numbers for the dredging vessels; placing of buoys, court procedures, etc.

The State Fishery Force.

Prior to 1865, the enforcement of the oyster regulations was left to the care of the sheriffs and constables, with the assistance of the *posse comitatus* and such vessels or steamers as they might desire to impress into their temporary service, the same being at the risk and expense of the State. When the license system was adopted in 1865, all captains and employes of licensed vessels and boats were constituted officers of the State, with full powers of sheriffs in the enforcement of the oyster laws. In 1867, (ch. 184,) the comptroller of the treasury was authorized, at such times as he might think the interests of the State required, to charter a steamer, properly manned and equipped, to cruise in the bay for special periods of time not exceeding ten days, to overhaul and examine the vessels engaged in oystering, and to arrest offenders. All of these methods proved so ineffectual that in 1868 (ch. 406) provision was made for an "oyster police force," now officially designated the "State fishery force," but popularly known as the oyster navy; and an appropriation was made for the purchase of one steamer and two sailing vessels, to be kept constantly cruising the waters of the State where violations of the oyster regulations might be expected. The control of this force was vested in the "Board of Public Works," consisting of the Governor and certain other officials of the State. This board was authorized to properly equip and provision the vessels and supply them with competent officers and men.

The fleet obtained consisted of one steamer of 113 tons burden, and two fast-sailing vessels well equipped with boats and with five men each. Both steamer and sail vessels were supplied with cannon and ammunition, which they were authorized to use in enforcing the oyster regulations. One of the sailing vessels patrolled the Chesapeake and tributaries above the Patuxent, and the other one below that point, while the steamer was kept cruising over the entire bay and tributaries. In 1874, six additional vessels were added to the force at a cost of \$20,000; in 1882, 1883 and 1884, additional vessels were added, and in 1885 two steamers were obtained at a cost of \$62,000. In 1888, the old steamer was disposed of and additional sail vessels added.

At present the force consists of two steamers, nine schooners, two sloops, and eight smaller and "local" boats. The latter are employed for six months only, and are provided by certain counties to enforce the oyster regulations within their respective limits, yet are under the direction of the commander of the State force. They carry three or four men each and are armed with rifles. Of the State vessels, the steamers each have a crew numbering twelve men, and the schooners and sloops have six men each, all vessels being furnished with one cannon and a number of rifles. This makes a total of 120 men in the force, and the cost of maintaining the fleet, including all salaries, provisions, ammunition, repairs, etc., has, during the last five years, averaged about \$65,000 annually.

One of the sail vessels patrols the Chester river, including Swan Point; one, the Eastern bay and tributaries, and the waters of Talbot county as far down as Black Walnut Point; one, the Choptank river and tributaries; one, the Little Choptank river; one, the waters of Fishing bay, Honga river, Tar bay, Hooper Straits, and Holland Straits; one, the waters of Wicomico county; one, the waters of Somerset county; two, the waters of Anne Arundel, and two, the waters of Calvert, St. Mary's and Charles counties, while the steamers do duty throughout the State, except in the Sinepuxent bay.

The principal duties of the force are to see that no one engages in oystering without obtaining a license, to prevent the dredgers from oystering on the reefs used by the scrapemen, and to prevent both dredgers and scrapemen from resorting to the areas reserved for the tongmen; to enforce the close season, the cull law, and the various minor regulations of the oyster industry, as well as the fish and water-fowl laws of the State. While during certain years this fleet has not succeeded in accomplishing as much as some persons expected of it, yet, considering the extensive area of water to be guarded and the thousands of oyster boats and vessels at work, it is not surprising that violations of the regulations occur.

The most noticeable violations of the regulations are made by the dredgers in frequenting areas reserved for the tongmen. These became especially prominent in the fall of 1888. The police vessels were not so well armed then as at present, and the oystermen lost confidence in the ability of the force—in the fights occurring, the former being frequently routed by the dredgers. On several occasions during that year a number of dredging vessels combined and openly defied the fishery force. This aroused popular attention; the fleet was better provided with arms and ammunition, its personnel reorganized, several dredging vessels were sunk, and a few men killed. Since then the oystermen have had greater respect for the law, and while at times a dredger may trespass on forbidden areas it is usually done under cover of darkness or fog, and such violations are not by any means so frequent as formerly.

Prior to 1880, the members of the crew as well as the captain of the vessel were held liable for violations of the oyster laws, and the vessel was allowed to go free. When caught, the captain and crew were placed in jail, but the former was usually bailed out and his fine paid if the case ultimately went against him. The crew being penniless and without friends, frequently remained in jail for months, imposing an expense on the county. Many of these men were foreigners, and very few of them were familiar with the laws regulating the fishery, and it was manifestly unjust to make them suffer for obeying

the orders of their captains. This has since been remedied and the penalty for violating the oyster laws is now properly shared by the vessel.

Conclusion.

From the data presented on the preceding pages is obtained the following tabular statement, exhibiting for a period of years the total number of persons employed in the oyster fishery of Maryland and the total quantity and value of the product:

SEASON.	Number of men.	Bushels of oysters.	Value.
1860—1861	3,000	3,000,000	\$1,050,000
1868—1869	6,885	8,040,970	2,814,340
1869—1870	7,470	9,233,475	3,231,716
1870—1871	7,582	8,947,803	3,031,731
1879—1880	13,748	10,600,000	3,869,000
1889—1890	20,481	10,450,087	5,204,456
1890—1891	21,878	9,945,058	5,665,866
1891—1892	21,280	11,632,730	5,866,120
1892—1893	21,200	10,142,500	5,500,000

The following table exhibits, for a number of seasons, the average catch of oysters and the average gross income for each man engaged in the fishery:

SEASON.	Average per man.	
	Bushels of oysters.	Gross income.
1860—1861*	1,000	\$350
1868—1869	1,168	409
1869—1870	1,236	432
1870—1871	1,180	399
1879—1880	771	281
1889—1890	510	254
1890—1891	455	259
1891—1892	547	275
1892—1893	478	259

*No dredging.

It is surprising, and contrary to what might be expected from observations in other States and countries, that the oyster reefs of Maryland have continued so long to produce oysters in such abundance, notwithstanding the vigorous fishery to which they have been subjected. But it will be observed that while little variation has existed during the last twenty-five years, in the quantity of oysters obtained annually, there has been a very large increase in the number of persons and the vessels and boats employed, indicating a decrease in the average catch per man and necessitating an increase in the price of the oysters.

In the meantime another and more serious change has taken place. The fishery being more extensively followed year after year, sufficient time is not given the oysters to attain their full growth, resulting naturally in a decrease in the average size of those brought to market. This decrease has been very noticeable, and the following tabular statement is presented, exhibiting for a period of years the proportion of "extra selects" among the Chesapeake oysters handled by Messrs. Platt & Co., one of the largest raw-shucking firms in Baltimore, this probably being an average for all the dealers in that city:

SEASON.	Proportion of extra selects to total quantity.
1883—1884.....	$\frac{1}{10}$
1884—1885.....	$\frac{1}{14}$
1885—1886.....	$\frac{1}{25}$
1886—1887.....	$\frac{1}{67}$
1887—1888.....	$\frac{1}{33}$
1888—1889.....	$\frac{1}{43}$
1889—1890.....	$\frac{1}{33}$
1890—1891.....	$\frac{1}{50}$
1891—1892.....	$\frac{1}{60}$

It is thus observed that, according to the data at hand, the present average catch per man is less than one-half of what it was twenty-three years ago, and only two-thirds of what it was thirteen years ago, notwithstanding the fact that the boats and apparatus of capture used at present are far more costly and

effective, and because of the higher prices, the fishery is more vigorously prosecuted than was formerly the case; also the gross incomes of the oystermen are constantly decreasing, being now less than two-thirds of what they were in 1870, notwithstanding the greater expenses which they incur.

No statistics are available with which to exhibit the comparative sizes of the oysters caught prior to 1883; but if the very general complaints prevalent throughout the Chesapeake, during the last decade, in reference to the decreased size of the oysters, are well grounded, it is evident that the decrease since 1870 has been very great. This decrease in the size of the oysters is of more consequence than its effect on the markets or on Maryland's prestige as a producer of superior-grade oysters. It is a principle in the economy of nature that a species should be reproduced by the best developed and hardiest of its kind. On this principle the progeny of a colony of oysters not yet attained mature development can scarcely be expected to be so vigorous and capable of combating the many adverse agencies to which these mollusks are subjected as those of a well-stocked reef of large brood-oysters. The condition of the industry, as indicated by this decreasing abundance and reduced size of the mollusks, the decreasing incomes of the fishermen and increasing prices of the oysters, demands the serious consideration of every well-minded citizen of Maryland, whether he be actively engaged therein or not. Already the price of the Chesapeake oysters is so high and the size so small that a number of Baltimore marketmen are required to purchase largely from other coastal regions, one firm alone in one year purchasing \$70,000 worth of large oysters in Northern States.

The General Assembly of Maryland has not permitted this condition to come about without endeavoring to prevent it; and the opinion, existing to some extent, that this State has exercised no care toward conserving and preserving her natural oyster beds, is without foundation in fact, for she has expended more effort than any other American State toward protecting and preserving the public reefs, to which may be due the fact that they are now in better condition than those in most

other States. I believe that there has not been a single protective or restorative measure, giving assurance of benefit to the free or common fishery, adopted by any government in America or Europe, that has not at some time been operative, in whole or in part, in Maryland. From 1820, when "well-grounded apprehensions were entertained of the utter extinction of oysters in the State," up to the present time, by means of close seasons, interdiction of supposed injurious modes of fishery, and other restrictive measures, the State has constantly endeavored to conserve and protect the common fishery.

The stationary life of oysters, tending to facilitate their removal from the beds, is resulting in a depreciation of the free fishery in all civilized countries, notwithstanding severe protective laws, no community having yet learned the secret of preserving undiminished the prosperity of the public beds. It is to be regretted that no data are available by which to compare the extent of the common and private oyster fisheries. The growth of the latter during the last twenty years has been marvelous. At present scarcely one-half of the world's product of oysters is marketed directly from the public reefs, the quantity going upon the food market from Maryland being greater than that from all the remaining public beds of the world combined. Witnessing the continued depletion of their public reefs in spite of their protective laws, States and counties have grown weary of their task of attempting to preserve them and have encouraged the investment of private enterprise on barren grounds, making the regulations of the common fishery subsidiary thereto.* In Maryland, however,

*Many quotations similar to the following might be made from official reports:

"We find that the supply of oysters has very greatly fallen off during the last three or four years. That this decrease has not arisen from over-fishing, nor from any causes over which man has direct control, but from the very general failure of the spat, or young of the oyster, which appears, during the years in question, to have been destroyed soon after it was produced. A similar failure of spat has frequently happened before, and probably will often happen again. That the best mode of providing against

there are so many thousands of persons dependent on the common fishery, and its prosperity is so important a factor in the wealth of the State, that it has received every safeguard that presented a possibility of benefit, so far as the leaders in State legislation could conceive and carry out. And the regulations and sentiment that now surround the industry in Maryland are such that if ever the common oyster fishery on the public reefs becomes a thing of the past in America, I feel confident that its last battle-ground will be along the shores of the Chesapeake.

The great trouble with the present methods and regulations is not with the close seasons or with the implements employed, but, as in other States, the oystermen take no individual interest in the preservation and development of the reefs on which they work, their sole object being to obtain at the moment all the oysters possible, without reference to the future supply. Individual interests clash with the public good. While it is the public or general interest of all that each oysterman should refrain from taking the small and poor oysters, take few during bad markets, and give attention to removing enemies and leaving the reefs in the best condition for further reproduction and growth, it is his individual but temporary interest to take all he can get, big and little, fat and poor, in good markets and in bad markets, and with the least possible expenditure of time. As with other men, the individual gain of to-day outweighs the public good of to-morrow.

An instance of the manner in which the public interest suffers at the hands of individual benefit may be cited in the

these periodical failures of the spat is to facilitate the proceedings of those individuals or companies who may desire to acquire so much property in favorably situated portions of the sea bottom as may suffice to enable them safely to invest capital in preparing and preserving these portions of the sea bottom for oyster-culture. * * * That no regulations or restrictions upon oyster fishing, beyond such as may be needed for the object just defined, have had, or are likely to have, any beneficial effect upon the supply of the oysters."—*Report of the commissioners appointed to inquire into the sea fisheries of the United Kingdom, 1866.*

cull law enacted in 1890, which required that all oysters measuring less than two and a-half inches in length should, when caught, be returned at once to the water. It is generally admitted throughout the Chesapeake, that could this regulation be enforced it would be more beneficial to the public reefs than any other oyster enactment ever made by the State. But as these small oysters, measuring from one to two and a-half inches, are worth about twenty cents per bushel, it is the temporary interest of each oysterman to sell them at the shucking-houses or for planting in other States, and as there are over 8,000 vessels and boats at work, it is obviously difficult for the fishery fleet to thoroughly enforce the law.

Under the present regulations of the fishery, the number of very small oysters (under one inch in length) destroyed frequently equals the number of large ones utilized. Attached to the shells of the large oysters will occasionally be found many small ones, from three to six months old. As many as sixty of these young oysters have been found attached to the shell of a single mature one. This number, however, is very unusual, but the proportion for the entire bay might certainly be expected to average, during most spawning seasons, at least one or two young oysters for every mature one. These small oysters can not be utilized in the market-houses, and when delivered there, are thrown upon the shell heaps. They have already passed through the most precarious period of their existence. Their shells have become sufficiently hard and stout to resist many of their enemies, and while some of them would doubtless perish if permitted to remain on the reefs, yet the mortality among them would scarcely be much greater than occurs among mature oysters. The remedy for their protection is not apparent. A careful oyster-culturist would doubtless postpone the taking of the mature oysters until the young ones were sufficiently developed to be safely removed from their attachment, but this course is scarcely practicable on the public domain without temporary close time on the reefs.

With respect to close seasons, which for forty years have been the most popular forms of protection in America, the close time in the fall is of value because of the protection it affords the small oysters from injury from the source above noted. But the opinion is growing among the best-informed persons that the spring close time is generally of little value to the reefs; in fact, under some circumstances it would be better for the oystermen to continue their operations to within a week or so of the spawning time. Their work would render the reefs more nearly free from sediment, vegetable growth, etc., thus facilitating the attachment of the spat.

The general opinion that the disturbing of mature oysters, immediately prior to the spawning time, greatly injures them, has little foundation. To be sure, if oysters are removed from the reefs there are so many less to perform their reproductive functions, but the same applies equally to those removed eight months before. The action of the dredges themselves is not materially injurious to those oysters left on the beds. Naturalists are well aware that the most delicate ascidians are frequently roughly dredged, and if placed in a bucket of sea water may be examined in perfect health an hour or two afterwards; and it is scarcely probable that so hardy a mollusk as an oyster, capable of being kept barreled for weeks, shipped thousands of miles, and then bedded with perfect safety, would suffer so much injury from being jostled by the dredge as to fail in performing its usual functions. However, the spring close season in Maryland is deemed valuable because of its restricting the spring trade in small oysters for bedding purposes in other States, which, however, could be effected by the complete enforcement of the cull law. It is also of benefit to the agricultural interests along the shores in making labor more abundant.

There are other conditions that encourage a depreciation of the free fishery, and for which the individual oystermen are not blamable. Among these might be mentioned an entire lack of care to leave the grounds or the small oysters in a condition suitable for the growth of the latter, and an absence of any

attempt to prepare the beds for the attachment of a "set" during the spawning season. But everyone will recognize the extreme difficulty of devising a system for remedying the latter evil suitable for application over large areas of the public domain.

These two provisions—protection of small oysters and placing the reefs in the best possible condition for the attachment of a "set"—are the key-notes to the proper government of the fishery on the public beds, and any system of regulation that has not these for its objects can not be expected to be of great value.

It has been proposed that certain portions of the bay—half, for instance—be closed for two or three years in order that the oysters now thereon may have time to mature, and when this area is thrown open, the other be closed for a similar period, the system of open and closed districts being continued indefinitely. But there are many objections to such a procedure. When the southern half is closed, it works a hardship to persons living along the shores thereof, and when the fishery is interdicted in the northern half, the residents in that vicinity would consider themselves aggrieved. If, in order to remedy this objection, the size of the districts be reduced and the number of them be multiplied, it would be quite difficult to prohibit the fishery in the closed ones. Also, it has been shown that the operations of the oystermen improve the beds for spat-collecting purposes, and a stoppage of the fishery might to a material extent affect the attachment of a "set."

It seems that the only good result of such a regulation would be a restriction in the removal of small oysters, but this would be secured under present regulations by a complete enforcement of the cull law. Were the system to be adopted, the enforcement of the cull law would still be necessary, and it would increase local jealousies, already too numerous, add another to the many regulations now difficult of enforcement, and yet be of questionable value.

If there were adopted a regulation for obtaining a "set," having among its features the return to the water of a portion

of the shells accumulating about the shucking-houses, it seems possible that special benefit might result from this particular feature. When one considers that, as a component part of the oyster shells, 200,000 tons of carbonate of lime are annually removed from the Chesapeake, the question naturally arises as to the continuation of the supply. When returned to the water the shells rapidly disintegrate, furnishing material for the shells of other oysters. The probability of benefits, if any, to be derived from such provision, however, rests entirely upon speculation.

An opinion is quite current that the proper regulation of the oyster fishery in Maryland is for the State to lease or sell the natural reefs, and leave to the individual owners the question of protection or improvement of their respective holdings. Under the present condition of the industry and its environments, it seems that such a procedure would be detrimental to the welfare and interests of those persons dependent on that industry for support, as well as to the peace and good order prevailing in the tide-water regions of Maryland. I believe that no American State, and certainly none in which the fishery is of great consequence, has ever deemed it expedient to dispose of the public interest in any natural oyster beds. The fishery in Maryland is not, as frequently supposed, a haphazard undertaking conducted by a class of men depending for their success on violations of the State laws, but is on a firm, orderly basis—any sudden, revolutionary change in which would work great hardship and distress to the thousands of citizens depending on it for a livelihood.

If the cull law be vigorously and thoroughly enforced, increasing the minimum limit to three inches as soon as the condition of the fishery may warrant, and a proper system be adopted for preparing the reefs for the attachment of spat during the spawning season, it is not probable that an extreme disaster to the industry will early ensue.

Barren Bottoms.

It is claimed by many that the utilization for oyster-culture of extensive areas of ground now unproductive would add largely to the extent and revenue of the oyster industry in Maryland.

Of the water area of Maryland, about 2,000 square miles is now unproductive of oysters. In 400 square miles of this, the salinity of the water is probably not sufficient for the growth of these mollusks. A very large area of the remaining 1,600 square miles is covered with grass, thick mud, sand, or otherwise incapable of utilization with profit under present financial conditions. The area of such ground is a very uncertain quantity. In Connecticut, the experience has been that only one-fifth of the water area can be profitably utilized. But three-fourths of the unused ground is in the eastern half, where the barren condition is caused by heavy storms. Should a cultivating law be adopted in Maryland, the crabbing interests would doubtless demand consideration and thus further reduce the possible area. All of these restrictions would probably limit it to from 400 to 1,000 square miles, if the conditions in other States are trustworthy guides.

It is unnecessary in the present paper to discuss the practicability of oyster-culture on areas not provided by nature with those mollusks, for this is no longer a living question, it having been answered years ago in many practical ways and in innumerable waters of varying physical and biological characteristics. Already only one-half of the world's product of oysters are marketed directly from the public reefs. At present the trade in high-grade oysters is dependent on the product of private areas, notwithstanding the slight encouragements received. Nearly every celebrated variety on the American market is the product of private grounds; among these might be mentioned the "Providence Rivers," "Norwalks," "Blue Points," "Maurice Coves," "Parker Bays," "Chincoteagues," "Cherrystones," "Lynn Haven Bays," "Hampton Bars," "Stone Bays," "Bayou Cooks," etc.

In hundreds of sheltered coves, and in much of the deep waters of Maryland where the bottom is muddy or grassy, or other conditions, have heretofore prevented a growth of oysters, the difficulties might be overcome and the cultivation thereof be made profitable. The harvest is not always certain, but the chances are greatly in its favor, and the profits are sufficiently large to have merited more encouragement than has heretofore been accorded the industry. The situation of the Chesapeake, between the cold waters of the North and the warm waters of the South, protecting it from great extremes of temperature, is favorable to oyster-culture. Except in the extreme southern portion, this bay is also comparatively free from the severe storms and predaceous enemies that effect such enormous destruction on the oyster beds of Northern States.

Localities favorable to the development of oysters are not always best adapted to their reproduction, and places where oysters breed rapidly are sometimes not favorable to their growth. Generally the growth of oysters is practicable in waters having less saline constituents than appears necessary for breeding purposes. There is probably no locality of equal area in America, if in the world, in which oysters are produced in such numbers as on the flats on the seaside of Accomac and Northampton counties, Virginia; yet, if left on their native grounds, they scarcely ever exceed two and one-half inches in length. The famous "Kettle Bottom" oysters of the Potomac river are of great size, but do not breed in abundance there. Under the present regulations in Maryland, such grounds as may be suitable for the growth of oysters, but not adapted to their reproduction, are idle and barren, but under a planting system might be utilized with profit.

Suitable regulations for ostreiculture could be adopted which, without working change or injury to the present free fishery on the public reefs, would permit the development of this industry for the employment of the idle labor of the State. They should meet with the approval and have the encouragement of the present oystermen of the Chesapeake.

The cultivating systems here outlined are by no means antagonistic to their interests; on the contrary, they, more than any others, are to reap the benefits. These men are familiar with the bay; they are familiar with the character of the grounds and with the methods of handling oysters; they are already fitted out with boats and implements for engaging in the business. They would acquire an area of ground which they could take pride in cultivating and improving, in adding to from year to year, and something on which they might depend in their old age.

There should be no fear of outside capitalists, monopolies, etc. There has probably never been an instance in which, after a State has adopted a cultivating law, the trade has been controlled by men from other States, if any attempt has been made to prevent it. On the contrary, in New Jersey, New York and Connecticut, many of the men who at present own the large oyster farms, the fleets of vessels, and employ the greatest number of men, were formerly public-reef tongmen and dredgers. The members of the firm previously referred to in this paper, who in six weeks gathered from its beds 160,000 bushels of oysters, valued at \$110,000, were public-reef oystermen eighteen years ago.

There is no warrant for concluding that the most extreme protective and restorative regulations that the State could adopt would preserve the common fishery from depletion to such an extent that there will be scarcely a subsistence for the men engaged therein. Numerous acts of assembly exist for protecting the oyster fishery on the public reefs of the United States coast north of Cape Cod, but not an acre of oyster-ground now remains to give operation to those regulations. The fishery, from Cape Henlopen to Cape Cod, has had even further restrictions, but at present scarcely one-twentieth of the 7,000,000 bushels of oysters produced annually in that region are marketed directly from the public reefs. France has witnessed the depletion of certain of her valuable reefs even when the fishery thereon was restricted to fourteen days in the year and three hours in the day. Already distress exists

at times in several isolated localities in Maryland, because of the decrease in prosperity of the oyster industry, and this is possibly a foreshadow of what will, in course of time, prevail in every tide-water region of the State, if the present unfavorable conditions of the fishery continue, without the possibility being given the oystermen for adding to their incomes by the investment of individual enterprise. Other than this, no prospect appears for a great improvement in the condition of the fishermen, and the only heritage they now have to leave their sons is contained in their small boats and a training for engaging in a vocation already barely affording a livelihood, and with every prospect of continued decrease.

But the benefits to be derived from a proper system of private oyster-culture would not be confined to those persons engaging in it or to those handling the products of the private areas, or to the increased amount of money disbursed along the shores. If the common fishery were still properly protected and regulated, private ostreiculture on present barren bottoms would, it seems, be of benefit to the public reefs and to the men operating thereon, even though the latter should never engage in growing oysters for themselves. The foundations for this statement are here briefly cited:

1. It is well known that the removal of medium-sized oysters to more favorable feeding-grounds, on which they may remain several months, greatly increases their market value, and if a planting industry were established, the small or poor oysters would find a much better market among the planters than at the shucking-houses. The oysters referred to are those measuring two and a-half inches and over, for the cultivation referred to in this report is based on the assumption that no change will occur in the present regulations of the common fishery so far as the cull law is concerned.

2. The cultivators would doubtless remove predaceous enemies from their areas, and this would decrease the number left to feed on the public reefs.

3. If, by reason of fishery or natural effects, the oysters on a public reef should be so fully removed or destroyed as to not leave sufficient for breeding purposes, the proximity of private oyster beds would supply the deficiency in spat.

4. By engaging the attention of a number of oystermen it would, to some extent, relieve the public reefs of the extensive fishery to which they are now being subjected and leave a greater quantity of oysters for those persons continuing to resort to those areas.

Ostreiculture in some States has to contend with an adverse movement brought on by its supposed friends rather than its enemies. The profits of few vocations have been so extravagantly represented as those of the one under discussion. The enthusiastic amateur agriculturist who writes on "five acres enough," has his counterpart in the field of ostreiculture. Reports evidencing great labor in preparation have gravely predicted an average annual product in Maryland of hundreds of millions of bushels of oysters under a wise system of regulations. The adoption of a system of private culture, dependent for its success upon the realization of such expectations, would doubtless result in failure. The conditions of aquaculture in this country, or in any other country, do not warrant such anticipations, and they have done much to retard the adoption of a practicable system of regulation for private-oyster-culture in many States. These extravagant ideas of production are not understood by the bay-men, and their acceptance by persons unfamiliar with the growth of oysters, leads to a difference of opinion which can be reconciled only when the truth of the subject is understood. It has resulted in the development of the feeling that the present barren bottoms are of enormous value, and should be parted with only at prices so high that persons of small resources cannot obtain them, and renders the development of extensive ostreiculture thereon impracticable.

It is questionable whether there is a single square mile of water area in America that has produced annually during the

last ten years 400 bushels to the acre. It is true that there are many planting areas from which even 1,000 or more bushels to the acre are annually removed. But the oysters are not produced there; being obtained elsewhere, they are bedded in the spring and are taken up during the succeeding winter. They are no more the produce of those areas than are cattle slaughtered in abattoirs the product of the few acres of grazing land attached thereto.

The system of private oyster culture at present practiced in Connecticut is admired by every one familiar with it. It has resulted in the creation of a new industry for the employment of capital and labor, in distributing \$1,000,000 annually among the workmen along the shore of that State, and extending and cheapening the food resources of the country. Yet the average annual yield of the 60,000 acres held by individuals is only twenty-five bushels per acre. About one-half of this area, however, is not utilized, and the cultivated portion yields annually about fifty bushels per acre. The tax imposed by that State is about ten cents per acre, and should this be increased to the figures proposed for adoption in some States, it would doubtless at once result in a great reduction in the extent of the industry, notwithstanding the fact that it is now on a well established basis.

Frequent reference has been made to what is being accomplished in Rhode Island in the collection of an annual rental of \$10 per acre, from certain sea bottoms, and this is used as a basis for the valuation of similar areas situated elsewhere. There are about 500 acres of ground in that State rented at this rate. They do not produce oysters, but are used for planting purposes, the oysters being bedded in the spring and removed during the succeeding winters. Because of the high rental little attempt is made towards the production of oysters, the plants being purchased from other States, and even the extent of the bedding trade is said to be curtailed thereby, it now being less than one-half as extensive as it was in 1880. It is true that the State treasury has received about \$5,000 annually, but if the taxes on the ground had been more reason-

able, Rhode Island might at present have sufficient oyster-producing farms to keep within that State the \$150,000 annually paid by the planters therein to the oyster-growers of other States, and to cause the receipts of the State treasury to equal those of the present.

The imposing of high taxes on oyster-grounds renders it financially impracticable to utilize them for any purpose other than the bedding of oysters, shifting them from one locality to another, which is not true oyster-culture.

In an address delivered at Baltimore, January 18, 1891, the following expression of opinion was made by Hon. Marshall McDonald, United States Commissioner of Fish and Fisheries, who has given close attention to aquaculture in all its branches:

In the case of that broad area of sea bottom which at present yields nothing to production, it would, in my judgment, be wise on the part of the State to permit its entry under conditions similar to those which are prescribed for the public lands of the State above tide.

The man engaged in oyster production should be harassed by no imposts or special supervision. He should be treated as is the farmer, protected in his rights of property, and his investment required to bear equally with the lands above tide the burdens of taxation. The State should seek to derive its revenue not from any special tax or from extravagant prices for sales or entry, but from the vastly increased valuation which would be given to these lands when the opportunity for their improvement is afforded.

There is a greater area of sea bottom in the United States suitable, if properly prepared, for the growth of oysters than any probable market demand can utilize. The Atlantic Coast States are wealthy in barren sea bottoms, available for the culture of oysters, but most of these States are so neglectful of giving proper encouragement to the development of them that only in few places are they of great financial value. A broad system of ostreiculture demands more facilities than a restriction to five or ten acres along the shore at high rental and with temporary tenure.

Not only does successful ostreiculture require sufficient areas on which to operate, but it must be surrounded with favorable market and financial conditions. Texas, with its characteristic generosity, authorizes each citizen of the State to pre-empt for oyster-culture sixty acres of sea bottom, without cost and without taxes, yet not one-hundredth of its bay bottoms are being so utilized. In 1889, North Carolina threw open to her citizens 800,000 acres of barren ground under favorable pre-emption conditions, yet only one-thirtieth of this area has been located. The condition in Georgia is much the same. The Middle and New England States, with long-established oyster trades, have been more successful in having their sea bottoms pre-empted and successfully utilized.

The physical, financial, and market conditions in Maryland are such that judicious encouragement could almost at once place her in the head ranks of oyster-cultivating States; order and industry would spring up where there is now but a barren waste, thousands of men now almost idle could be given employment; relieving the labor market of this surplusage would benefit the laboring classes in all industries of the State; while the oystermen at work on the public reefs, without being in any respect molested in their present occupation, would have an opportunity for building up a kindred industry to add to the support obtained from the common fishery.

Chronological List of Publications.

- 1858—Oyster trade of the Chesapeake. De Bows Commercial Review, pp. 259-260, vol. 24.
- 1865—Etude sur l'industrie Huître des Etats-Unis. Par M. P. de Broca. Paris, Challamel, 1865. 12mo. 266 pp. Translated in part on pp. 271-319 of Report of the United States Fish Commission for 1873-74 and 1874-75. Washington, 1876.
- 1869—Oysters of the Chesapeake—their propagation and culture. pp. 341-347 of Report of Commissioner of Agriculture for 1868. Washington, 1869.
- 1870—Report upon the oyster resources of Maryland to the General Assembly. By Hunter Davidson, Esq., commander State oyster police force. Annapolis, 1870. 8vo, 20 pp.

- 1872—Report on the oyster fisheries, Potomac river shad and herring fisheries, and the waterfowl of Maryland, to his excellency the Governor and other commissioners of the State oyster police force, January, 1872. Annapolis, 1872. 8vo. 48 pp.
- 1873—Report of the commander of the oyster fisheries and waterfowl of Maryland to his excellency the Governor and the commissioners of the State oyster police force, January 1, 1874. Annapolis, 1873. 8vo, 11 pp.
- 1880—Report of the commissioners of fisheries of Maryland, January, 1880. Annapolis, 1880. 8vo, LXXIX pp.
Constituting an appendix to the preceding are the following two articles:
- Development of the American oyster. By Dr. W. K. Brooks. 103 pp., with ten plates.
- Extracts from report of Francis Winslow's mode of investigations of oyster beds in Tangier and Pocomoke sounds and parts of the Chesapeake bay. pp. 105-219.
- 1881—The history and present condition of the fishery industries; Tenth Census of the United States. The oyster industry. By Ernest Ingersoll. Washington, 1881. 4vo, 252 pp., 22 plates.
- 1881—Deterioration of American oyster beds. By Francis Winslow. Popular Science Monthly, New York, Vol. xx, pp. 29-43, 145-156.
- 1881—An account of experiments in oyster-culture, and observations relating thereto, made at St. Jerome Creek, Maryland, during the summer of 1880. pp. 1-66 of appendix to report of the Maryland fish commission. Hagerstown, Md., 1881.
- 1882—Report on the oyster beds of the James River, Virginia, and of Tangier and Pocomoke sounds, Maryland and Virginia. By Francis Winslow. Appendix No. 11. Report for 1881, United States Coast and Geodetic Survey. Washington, 1882. 4vo, 87 pp., with plates and charts.
- 1884—Present condition and future prospects of the oyster industry. By Francis Winslow. pp. 148-163 of Transactions of the American Fish-Cultural Association; thirteenth annual meeting. New York, 1884.
- 1884—Report of the oyster commission of the State of Maryland. January, 1884. Annapolis, 1884. 4vo, 183 pp., 13 plates, 4 charts.
- Report of the oyster commission of the State of Maryland. January, 1884. Baltimore, 1884. 4vo, 193 pp., 13 plates, 4 charts. [A reprint of the foregoing.]
- 1885—Report of operations at St. Jerome Station, in laying out oyster ponds by the steamer *Fish Hawk* in 1883. pp. 1153-1156 of Report of U. S. Fish Commission for 1883. Washington, 1885.

- 1887—The oyster industry. By Ernest Ingersoll. pp. 507-567 of sec. v, vol. II, of the Fisheries and Fishery Industries of the United States, by George Brown Goode and associates. Washington, 1887.
- 1892—Fourth biennial report of the bureau of industrial statistics and information of Maryland. Thomas C. Weeks, chief of Bureau, 1890-91. Annapolis, 1892. The oyster industry, pp. 11-194.
- 1892—Annual report of the commander of the Maryland State fishery force to the board of public works, for the year 1891. Annapolis, 1892. 8vo, 13 pp., 14 plates.
- 1893—First annual report of the bureau of industrial statistics of Maryland. A. B. Howard, Jr., chief of bureau. 1893. Baltimore, 1893. The oyster industry, pp. 113-142.
- 1893—Record of licenses issued to take oysters in the State of Maryland and the several counties thereof during season of 1892-93, and licenses to take oysters with scrape and dredge, issued by the comptroller of the treasury. Baltimore, 1893. 8vo, pp. 135.
- 1893—Maryland—its resources, industries, and institutions. Prepared for the board of World's Fair managers of Maryland by members of John Hopkins University and others. Baltimore, 1893. The oyster and the oyster industry, pp. 264-312.
- 1893—"Oysters and roads." Address delivered by B. Howard Haman before the Maryland convention for good roads, held at Baltimore on January 12, 1893. Printed by order of the Maryland road league. 8vo, 24 pp., with chart.

*Statement of appropriation and expenditures for Bureau of
Industrial Statistics, for the fiscal year ending Febru-
ary 28, 1894.*

Amount of appropriation, March 1, 1893.....	\$5,000 00	
Salary Chief of Bureau.....		\$2,500 00
Other salaries.....		1,756 00
Stationery.....		16 25
Office rent.....		180 00
Postage.....		20 50
Traveling expenses.....		235 00
Fuel.....		29 00
Daily newspapers.....		18 99
City Directory.....		5 00
Towel Supply Company.....		12 00
Gas.....		1 75
Ice.....		4 65
Printing.....		82 40
Painting.....		23 00
Binding reports.....		15 75
Cut for road map.....		14 50
Sending out reports.....		73 71
Incidental expenses.....		11 50
Totals.....	\$5,000 00	\$5,000 00

